

THE WELLCOME EXCAVATIONS IN THE SUDAN
VOLUME III



ABU GEILI
TEXT AND PLATES

PUBLISHED FOR
THE TRUSTEES OF THE LATE SIR HENRY WELLCOME
BY THE
OXFORD UNIVERSITY PRESS
LONDON NEW YORK TORONTO

ABU GEILI

The first instalment of the record of the late Sir Henry Wellcome's excavations in the Sudan has already been published under the title *Jebel Moya*. This present volume completes the record and gives an account of the operations at Abu Geili, Saqadi, and Dar el Mek.

These are all habitation sites. Abu Geili, on the Blue Nile, and Saqadi, some thirty miles to the west, were occupied during the early centuries A.D. and shared a common culture. Also at Abu Geili, but not on the village site, were found graves of the Fung period (16th–17th centuries A.D.), the grave goods from which included iron weapons and black-polished bowls of a type previously unknown.

Dar el Mek is a medieval terraced village site on a spur of the Jebel Moya massif, and the occupation there was roughly contemporary with the later period at Abu Geili.



Digitized by the Internet Archive
in 2014

<https://archive.org/details/b20457911M003>



THE WELLCOME EXCAVATIONS IN THE SUDAN
VOLUME III

ABU GEILI
AND
SAQADI & DAR EL MEK

THE WELLCOME EXCAVATIONS IN THE SUDAN



وَلَكُمْ جَبَل مَوِيَا
سَنَاد

VOLUME III

ABU GEILI

By O. G. S. CRAWFORD, C.B.E., F.B.A., and FRANK ADDISON, F.S.A.

AND

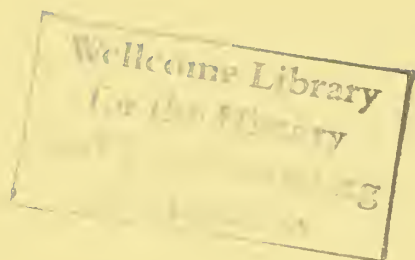
SAQADI & DAR EL MEK

By FRANK ADDISON, F.S.A.

PUBLISHED FOR
THE TRUSTEES OF THE LATE SIR HENRY WELLCOME
BY THE
OXFORD UNIVERSITY PRESS

LONDON NEW YORK TORONTO

1951



*The contents of this book are copyright. Neither
letterpress nor illustrations may be reproduced
without permission of the Trustees of the late
Sir Henry Wellcome*

(2)
f01105
ZCI.12

PRINTED AND BOUND IN GREAT BRITAIN FOR
THE TRUSTEES OF THE LATE SIR HENRY WELLCOME
AT THE UNIVERSITY PRESS, OXFORD
BY CHARLES BATEY, PRINTER TO THE UNIVERSITY

PREFACE

SOME account of the inception and projected scope of the late Sir Henry Wellcome's excavations in the Sudan has already been given in the Preface and Introduction to *Jebel Moya*. It was there explained how one of us (Crawford) was responsible in 1914 for the actual excavation of the site at Abu Geili, while the other (Addison) was in 1937 entrusted by the Wellcome Trustees with the publication of the results of all Sir Henry's Sudan excavations. When the Trustees were apprised of the facts of the situation they readily agreed that Crawford should take his rightful share in the preparation of the report on the excavation at Abu Geili; but for some years, largely owing to the war of 1939-45, collaboration was latent rather than active.

At the time the joint effort was first discussed the material from all the sites was still in the warehouse at Willesden referred to in the earlier account, and circumstances made it impossible for Crawford to spend much time continuously in London. It was therefore agreed that he should take his own diary and records to Southampton and compile his account from there while Addison should work on the actual material. A convenient opportunity occurred in 1943 for the handing over of the records, but serious work did not begin until late in 1946.

Soon after the war ended, the sale of the Willesden warehouse made it necessary to remove from the premises as quickly as possible all the archaeological material remaining from Sir Henry's excavations. That from Jebel Moya which was not finally discarded was distributed to the museums approved by the Trustees, and that from the other sites was transferred to a basement room in the Institute of Archaeology, Regent's Park, where all the work on it has been carried out.

As it is now presented, the report on Abu Geili may be regarded as Crawford's account of his excavation with supplementary notes by Addison. In so far as it is necessary to indicate our respective shares it may be said, in general, that everything written in the first person singular is from Crawford's hand. Chapters I and II are entirely Crawford's, Chapter V entirely Addison's, while Chapters III, VI, and VII contain contributions from both, dovetailed together but unmodified; neither of us has seen fit to suggest alterations in anything written by the other. In Chapter IV the separate accounts of the pottery have not been combined, partly owing to the difficulty of fitting them smoothly together, and partly because there are advantages in publishing complementary accounts, written independently and from different viewpoints (the one with records and no objects and the other with objects and no records), which are nevertheless in fundamental agreement.

Our collaboration did not extend to cover the reports on Saqadi and Dar el Mek. For these, in their present form, Addison is alone responsible; but it will be seen how closely these sites were, in their different periods, related to Abu Geili and how the dating of all three is interdependent.

In the work carried out at the Institute of Archaeology we have had the assistance of Mr. I. W. Cornwall and, in the earlier stages, of Miss J. M. Halford. Besides much routine drudgery they were jointly responsible for the original measured drawings of pottery types from which Plates XXVII-XXXIII have been compiled, and Mr. Cornwall alone for the drawings in Plates LVII-LIX, Plate LXV, and Figs. 24, 25, and 40. The plan of the rooms and graves at Abu Geili, in

the pocket at the end of the volume, was plotted in pencil by Crawford and inked and lettered by Addison, as were also the sections in Plate XXI and in Figs. 2-5. The drawings in Plates XLI and LXXVI and in Figs. 10 and 19 are from the pen of Mr. Norman Howard, and the remainder of the drawings, illustrating the reports on all three sites dealt with in this volume, have been prepared for publication by Addison. Where these consist of plans they are, with the exception of Plate I and Figs. 27 and 28, copied direct from those prepared at the time of excavation and preserved amongst the records.

The photographs of pots in Plates XLIII-XLVI were taken at Willesden by Mr. J. Michieli of the Wellcome Historical Medical Museum, but all the other photographs of objects were taken by Mr. M. B. Cookson at the Institute of Archaeology.

We gratefully acknowledge the consideration extended at all times by the Wellcome Trustees and the help freely given by officials of the Wellcome Foundation Ltd. and the Institute of Archaeology.

O. G. S. CRAWFORD

NURSLING

July, 1948

F. ADDISON

LEEDS

July, 1948

CONTENTS

PART I. ABU GEILI

CHAPTER I.	INTRODUCTION: DESCRIPTION OF SITE 400 AND ITS STRATIFICATION	1
CHAPTER II.	THE MOUND OR VILLAGE SITE	9
CHAPTER III.	THE CEMETERY: DESCRIPTION OF GRAVES; FUNG GRAVE-GOODS	15
CHAPTER IV.	THE POTTERY, (1) <i>by</i> O. G. S. CRAWFORD	39
	(2) <i>by</i> F. ADDISON	42
CHAPTER V.	BEADS, PENDANTS, AND AMULETS	68
CHAPTER VI.	MISCELLANEOUS FINDS	80
CHAPTER VII.	OUTLYING SITES (SITE 401)	107

PART II. SAQADI

CHAPTER VIII.	INTRODUCTION	111
CHAPTER IX.	EXCAVATION AND STRATIFICATION	113
CHAPTER X.	MISCELLANEOUS FINDS	120
CHAPTER XI.	THE BUILDING REMAINS	131

PART III. DAR EL MEK

CHAPTER XII.	INTRODUCTION	143
CHAPTER XIII.	THE HABITATION REMAINS	148
CHAPTER XIV.	THE POTTERY	161
CHAPTER XV.	MISCELLANEOUS SMALL OBJECTS	172
CHAPTER XVI.	CONCLUSIONS	179

LIST OF PLATES

PART I. ABU GEILI

PLATE

- I. Map showing position of Abu Geili and other sites
- II. Plan showing environs of Site 400. 1:10,000
- III. Plan of Site 400 showing contours and 20-metre squares. 1:2,000
- IV. Panoramic view of Site 400 before excavation
- V. 1 and 2, The mounds before excavation; 3, Clearing the site; 4, The conglomerate plateau at low Nile
- VI. 1, View of riverbank; 2, One of the Sudanese foremen employed on the site
- VII. Excavation in progress on Site 400; four views
- VIII. 1, General view of mound site partly excavated; 2, showing rooms fully excavated
- IX. 1, 2, and 3, showing pits in floors of rooms; 4, view of trench
- X. Four views showing pots *in situ*, O.C.s 703, 741, 742, 745, 746, 747, 748, 749
- XI. Five views showing pots *in situ*, O.C.s 700, 701, 726
- XII. 1, Large pot O.C. 702 *in situ*; 2, Large pot O.C. 781 *in situ*; 3, Querns *in situ* in Room 35
- XIII. Photographs of graves 91, 84, 30, 2, 89, 88
- XIV. Photographs of graves 9, 29, 17, 12, 82, 95
- XV. Photographs of graves 23, 27
- XVI. Photographs of graves 5, 10
- XVII. Four views of square GA, 4-5, showing position of graves
- XVIII. Two views of square GA, 3-4, and two of square AB, 3-4, showing position of graves
- XIX. Five views showing fire-places
- XX. Plan of graves in square 16
- XXI. Three sections across Site 400
- XXII. Grave 400/100 and the pottery from it
- XXIII. Grave 400/100, beads and metal objects
- XXIV. Iron axe-heads from Fung graves
- XXV. Iron spears from Fung graves

PLATE

- XXVI. Iron spears from Fung graves
- XXVII. Pottery types
- XXVIII. Pottery types
- XXIX. Pottery types
- XXX. Pottery types
- XXXI. Pottery types
- XXXII. Pottery types
- XXXIII. Pottery types
- XXXIV. Decorated potsherds
- XXXV. Decorated potsherds
- XXXVI. Decorated potsherds
- XXXVII. Decorated potsherds
- XXXVIII. Decorated potsherds
- XXXIX. Decorated potsherds
- XL. Fragments of stamped and painted pottery
- XLI. Pottery implements for decorating pottery
- XLII. Pot, O.C. 43
- XLIII. Photographs of pots. 1:4
- XLIV. Photographs of pots. 1:5
- XLV. Photographs of large pots. 1:6
- XLVI. A, Flat bowls from graves, 1:5; B, Fragments of *burmas*
- XLVII. Beads; A, Various materials; B, Clay
- XLVIII. Beads, glass
- XLIX. Beads; A, Faience; B, Carnelian
 - L. A, Pendants; B, Amulets
 - LI. Stone objects; A, Celts and rings; B, Pounders and rubbers
 - LII. A, Archers' looses; B, Pottery disks
 - LIII. Small objects of iron; A, arrow-heads, etc.; B, Miscellaneous
 - LIV. A, Miscellaneous metal objects; B, Nose and ear studs, shell ornaments
 - LV. A, Clay figurines; B, Woman spinning cotton in Abu Geili village
 - LVI. Spindle-whorls, photographs
 - LVII. Spindle-whorls, types of section

PLATE

- LVIII. Spindle-whorls, types of incised design
- LIX. Spindle-whorls, designs and stamp impressions
- LX. Photographs of tobacco pipes
- LXI. Site 401, the pit-grave, four views
- LXII. Site 401, the brick building and graves, four views
- Plan of rooms and graves in pocket at end of volume

PART II. SAQADI

- LXIII. Four views of the mound before excavation
- LXIV. Progress of excavation; clearing the stone wall, four views
- LXV. Pottery, rim sections
- LXVI. Decorated potsherds; A, from A stratum; B, from B stratum
- LXVII. Miscellaneous pottery fragments
- LXVIII. Beads
- LXIX. A, Spindle-whorls; B, Metal objects
- LXX. Stone objects; A, Mace-heads and rings; B, Archers' looses
- LXXI. Views of site partly excavated; 1 and 2, showing debris of mud brick; 3 and 4, showing burnt bricks *in situ*
- LXXII. Four views of brick building partly excavated

PLATE

- LXXXIII. Four views of wall and building as finally cleared
- LXXXIV. Views of stairways outside north and south walls
- Plan of building in pocket at end of volume

PART III. DAR EL MEK

- LXXXV. 1, View of Dar el Mek ridge; 2 and 3, Views of peaks
- LXXXVI. Plan of Site 300
- LXXXVII. 1, View of site from plain; 2, Path up to site; 3, *Tebeldi* tree
- LXXXVIII. Two views of site looking north
- LXXXIX. 1 and 2, Terraces; 3, 4, and 5, Holes ground in rocks
- LXXX. 1, Excavations looking north; 2, Hut 1, showing objects *in situ*; 3, Hut 4; 4, Open-air kitchen
- LXXXI. 1, Clearing House 12; 2, Hut 11 and House 12; 3, Hut 11; 4, House 12
- LXXXII. 1 and 2, Views from Dar el Mek ridge; 3 and 4, Clearing reservoirs
- LXXXIII. Potsherds
- LXXXIV. Potsherds
- LXXXV. Potsherds
- LXXXVI. Stone objects
- LXXXVII. Beads

LIST OF ILLUSTRATIONS IN THE TEXT

PART I. ABU GEILI

FIG.	PAGE
1. Key plan showing reference numbers of squares	3
2. Sections of trial pits	7
3. Room section 1	12
4. Room section 2	12
5. Room section 3	13
6. Burial attitudes	20
7. Iron spear-heads. 1:3	34
8. Iron axe-heads. 1:2	35
9. Iron knives and other objects of iron. 1:2	36
10. Fragment of decorated pottery casket, O.C. 186. 1:2	48
11. Basic element in pottery decoration	49
12. Types of faience beads. 1:1	68
13. Types of carnelian faceted beads. 1:1	73
14. Archer's loose or mace-head. 1:2	82
15. Mace-head from Pit 4. 1:2	82
16. Iron hoe (?) from grave 400/100. 1:2	87
17. Iron currency unit	95
18. Sections of tobacco pipes. 1:2	96
19. Stem-holder of pipe, O.C. 458. 1:2	96
20. Nuer tobacco pipes: (a) after Petherick; (b) after Petermann's <i>Ergänzungsheft</i>	97
21. Section of grave 401/1. 1:100	107

PART II. SAQADI

22. Plan of Site 200 showing division into 5-metre squares	114
23. Diagrammatic sections of test-pits	117
24. Designs on spindle-whorls from A stratum. 1:2	124
25. Designs on spindle-whorls from B stratum. 1:2	124
26. Section of iron bowl. 1:2	125
27. Plan of building at Saqadi. 1:200	132

PART III. DAR EL MEK

FIG.	PAGE
28. Plan of Jebel Moya showing position of Dar el Mek	144
29. Plan and section of Hut 1	149
30. Plan of House 3	150
31. Plan of Terrace 1, Area 1, showing relation of Hut 4 to Hut 1	151
32. Plan and section of Hut 4	151
33. Plan of Terrace 1, Area 2	152
34. Section across Terrace 1, Area 2	153
35. Plan of House 9	155
36. Plan and section of Hut 10	157
37. Plan and section of Hut 11	158
38. Plan of House 12	159
39. Incised designs on large pots. 1:2	162
40. Pottery, chiefly of the early period. 1:4	163
41. Rims from lowest stratum. 1:2	165
42. Rims from black stratum below Hut 4. 1:2	166
43. Rims from Terrace 2. 1:2	166
44. Rims from floor-level of Hut 4; a, b, and c inside, d and e outside. 1:2	166
45. Miscellaneous rims. 1:2	169
46. Profiles of clay beads. 1:2 (cf. Pl. XLVII B)	172
47. Chalcedony flake. 1:1	174
48. Iron arrow-head, O.C. 107. 1:1	175
49. Copper cross, O.C. 184. 1:1	175
50. Worked ivory fragments, O.C. 132. 1:1	175
51. Clay figurines. 1:1	176
52. Diagrams showing possible growth of terrace walls	180

NOTE

A "FAIR PROPORTION" of the objects found during the excavations recorded in this volume have been allotted to the Sudan Government Antiquities Service in accordance with the terms of the Special Licence to excavate issued to the late Sir Henry Wellcome. The remaining antiquities, in small but representative collections, have been presented by the Wellcome Trustees to the following museums and institutions:

British Museum, London

University of London, Institute of Archaeology

Ashmolean Museum, Oxford

University Museum of Archaeology and Ethnology, Cambridge

Peabody Museum of Archaeology and Ethnology, Cambridge, Mass., U.S.A.

The destination of all objects illustrated in this report is indicated either in the text or in the Description of Plates; it has therefore not been thought necessary to print a complete distribution list. Such a list is, however, preserved with the records of the Expedition.

The original records of all the late Sir Henry Wellcome's excavations in the Sudan, including those from Jebel Moya, have been deposited, by kind permission of the Committee, in the Griffith Institute, Ashmolean Museum, Oxford.

PART I

EXCAVATIONS AT ABU GEILI, 1914

CHAPTER I

INTRODUCTION: DESCRIPTION OF SITE 400 AND ITS STRATIFICATION

THE village of Abu Geili¹ is situated on the east bank of the Blue Nile, 2 miles above Sennar and 156 miles south of Khartoum (*see* map, Pl. I). At this point the river, for a distance of 2 to 3 miles, runs from east to west, and when it is low it uncovers a level plateau of hard conglomerate rock between the water and the bank on the north side. Immediately above the plateau are two oval mounds, the remains of a village of mud-brick houses which once extended over the plateau; this former extension has all been washed away by the river, and the two mounds are all that survive. Immediately north of the mounds was a graveyard, much later in date than the village. The modern village of Abu Geili lies about a mile inland to the north of the ancient site (*see* plan, Pl. II).

At the end of 1913 Mr. Wellcome formed the idea of excavating the site. I was then a member of his archaeological staff at Jebel Moya, where the conditions were difficult. Dixon,² who was the archaeologist in charge, had worked in Egypt with Petrie and Naville, and was not in sympathy with the recording methods of Dr. Reisner which were those adopted by Mr. Wellcome. I had just come from Dr. Reisner's camp at the Pyramids, where, in compliance with Mr. Wellcome's wishes, I had spent a month under instruction. Reisner was a born teacher, and this brief training—the only archaeological one I had ever had—was invaluable and has never been forgotten. Arriving fresh from this memorable experience and full of enthusiasm I found the somewhat cynical atmosphere of Jebel Moya most uncongenial; it was, I think, a perception of this that influenced Mr. Wellcome's decision to open up a new site—a decision which was, moreover, in accordance with his long-term policy.

Accordingly, on the 17th of December 1913, Mr. Wellcome took me with him in his Ford motor—the first ever used in those parts—to visit the site at Abu Geili. We camped that night on an old brickfield near the river, and I still remember an incident which much impressed me. When we arrived we found that, in spite of Mr. Wellcome's instructions, nothing had been prepared. Instead of setting up the tents and getting things ready, the Englishman deputed for

¹ "Geili" means "red" in the Nubian language. The first mention of it I have found is by E. de Pruyssenaere, who passed through "Abu-gaili" on 31st January 1863, 49 years almost to the day before the excavations began. He found there "the giraffes of Musa Pasha and fresh spoor of elephants in the Gaba" (*Reisen*

und Forschungen im Gebiete des Weissen und Blauen Nil, Petermann's *Ergänzungsheft*, No. 51, 1877, 3).

² He was killed in the Gallipoli campaign, *see Jebel Moya*, vol. I, p. vi.

this job had been amusing himself in Sennar. Mr. Wellcome was naturally very angry; but when at last the culprit turned up did not lose his temper, but set to work himself. Before darkness fell we had put the camp-beds together and made everything straight. The next morning Mr. Wellcome took me to see the site of Old Sennar, but I am sorry to say that I can remember nothing of it except that we saw a bustard there. We then crossed the river in his launch for the site, and I subsequently submitted a report to Mr. Wellcome recommending it as one worth excavating. At this date the existence of the graveyard was unsuspected and all that one could see was the remains of an inhabited site. Its general appearance, before excavations began, and the character of its surroundings, are shown in the panorama in Pl. IV which is built up from a series of photographs taken from a fixed point with the camera swinging round anti-clockwise roughly from east to west. The mounds are seen in Pl. V 1 and 2.

After some delay caused by negotiations with the Sheikh of Abu Geili (Ibrahim Dafalla), Mr. Wellcome decided to begin excavating the site and put me in charge, with Major Uribe as Camp Commandant and an Egyptian, Shefik Effendi, as clerk. For purposes of recording the area was designated Site 400, although Mr. Wellcome usually referred to it as "Aloa". Uribe and I worked together in complete harmony throughout the season, and without his experienced and tactful guidance the work would never have been possible. My own task was formidable enough in any case. It was my first big job and I had to conduct it in a language which I had only begun to learn three months before. Apart from Jebel Moyà, and the smaller sites of Saqadi and Dar el Mek, it was the first excavation of any kind to be undertaken south of Khartoum—and since then there have been no others. The only other site excavated anywhere near was at Meroë, some 300 miles lower down the Nile. Practically nothing was known about the archaeology of the region, and it was obvious that I should have to try and build up from the site itself some structure of archaeological types and sequences.

I had, however, my own ideas of how to begin work; the first thing to be done was obviously to clear the site (Pl. V 3) of the trees and bushes with which it was covered—and is now again covered. Then a contoured plan of the site should be made. It was only with great difficulty that I managed to persuade Mr. Wellcome to make this preliminary contoured plan. Anxious as always to find employment for as many men as possible, he chafed at the delay involved. Nevertheless, the undergrowth had been cleared by the 14th of January, when Robertson, Mr. Wellcome's surveyor, and I came over from Jebel Moya and started contouring. Some of the larger trees were then being cut down and in one of them was a leopard which, thus disturbed, came bounding out across the area we were surveying. As it galloped past a group of men, one of them gave it a clout on the head with a stick. Later on it carried off and ate one of the nomad women who lived with their cattle in the adjacent forest. Eventually it was shot by Uribe on the last day of the season. He saw it coming out of his *rakuba*. (A *rakuba* is a temporary shelter built of dry grass, of flimsier construction than a native hut.)

The contoured plan was finished in three days and Robertson and I returned to Jebel Moya on the 17th of January. It was useful, but a compromise. I had wanted to peg out the site first in 20-metre squares, as was done later, and then to tie the square system closely in with the contours, but was not allowed to do this. The contoured plan had to be drawn on a small scale and the square system imposed on it afterwards. There was thus a great loss of accuracy.

Both squares and contours are shown on the plan, Pl. III, and a key plan showing the reference number of the squares which were excavated is given in Fig. 1. It will be seen that four of

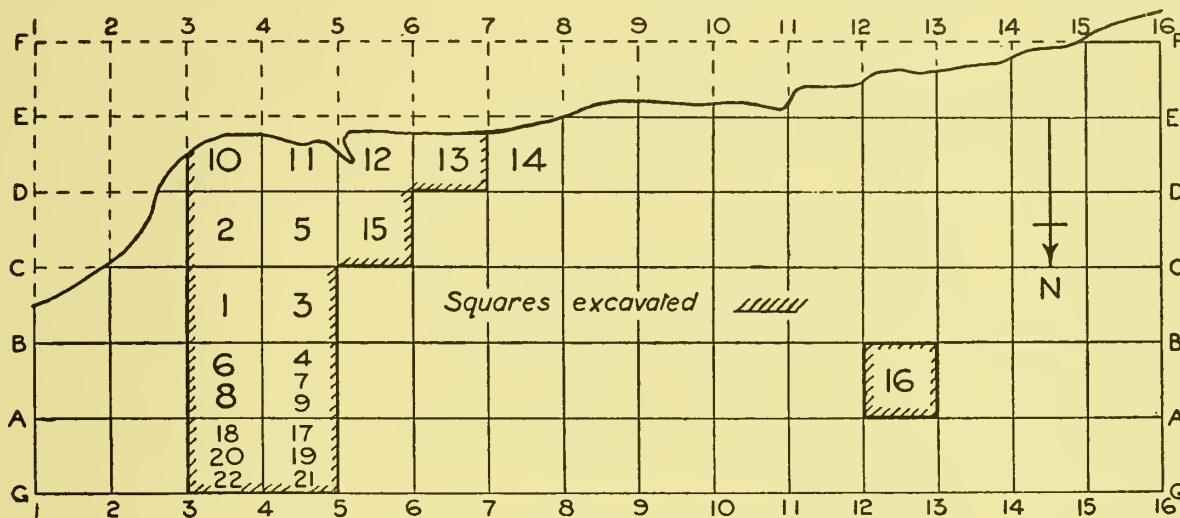


FIG. 1. Key plan showing reference numbers of squares

the 20-metre squares contain more than one reference number; the significance of these is as follows:

- | | | |
|--------------|---|--|
| 4 = AB, 4-5 | { | in N. part, surface to 1.00 m. b.s. |
| | | in S. part, surface to "gebel" |
| 7 = " " | | 1.00 m. b.s. to "gebel" |
| 9 = " " | | NW. part of square |
| 6 = AB, 3-4 | | modern surface to an old surface indicated by fires,
between 0.75 and 1.00 m. below the modern surface. |
| 8 = AB, 3-4 | | all below 6 |
| 17 = GA, 4-5 | | surface to "Fung" surface about 1.00 m. b.s. |
| 19 = " " | | from "Fung" surface to 2.00 m. b.s. |
| 21 = " " | | below 19 |
| 18 = GA, 3-4 | | surface to "Fung" surface |
| 20 = " " | | from "Fung" surface to 2.00 m. b.s. |
| 22 = " " | | from 20 to "gebel" |

During the excavation finds were recorded by their depths below the surface; but as the surface had, *ipso facto*, then been dug away, the depth could only be estimated by sighting to the edge of one of the 20-metre squares, which were divided by "walls" of soil left undug. The defect was to some extent overcome by the adoption of a system of relative levels. I cut a bench-mark on an old *tebeldi* tree (seen in Pl. IV), near my office-tent, assuming for it a height of 50 metres.¹

¹ This method of recording "absolute levels" has been criticised by many archaeologists, including the present writer. It is, of course, quite useless, and very misleading, unless the stratification is closely studied and drawn on the spot; but properly used—as a servant, not a master—it will always be found most helpful. The

ideal method, as Dr. Reisner was teaching 40 years ago, is to distinguish the strata, number them, and then record the objects found under those numbers. Measurements of depth from the existing surface are open to the same criticism, unless independently controlled.

Such levels do not, of course, tell one anything if one uses them blindly, but they do enable one to insert finds and floors on a sectional drawing if the horizontal position of the finds and floors has been recorded. This, of course, was done, and I am profoundly thankful that I did adopt this system. Without it the history of the stratification of the site could never have been elucidated. At the end of the season, Middleton, the geologist, and I spent four days taking the levels of the floors in the village and of all the important pots, graves, and other objects still *in situ*. Altogether we made several hundred observations, which have proved invaluable. I recall quite clearly my motive in doing this work; it was to ensure that, even if work was never resumed, the account of one season's work could be compiled. It was for me a question of principle, and it has been fully justified.

This levelling was not on Mr. Wellcome's programme and time had to be made for it. We could only accomplish it by working continuously every day, without the usual break between 12 and 3. It was the hottest time of year; the sun was directly overhead, and the "shade" temperature recorded at Jebel Moya on one of those memorable four days (27th April) was 117° Fahrenheit. Nevertheless, we suffered no ill effects, although one of us had been ill with fever and dysentery.

The two oval mounds stood on the top of a cliff, some 4 metres high at the most, overlooking the conglomerate plateau. Only half, or less than half, of the mounds were left, and the face of the cliff therefore provided a ready-made section through the heart of the site. I should have liked to begin operations by carefully cleaning up this cliff-face, recording the exact vertical position of selected finds, studying the stratification and floor-levels, and photographing the work at frequent intervals. I still think that this procedure would have been more valuable than that adopted, but it would have been slow and would not have needed many men; and Mr. Wellcome's excavations differed from all others in that the employment of the maximum number of workmen was the paramount objective. Thanks to the fact that the control exercised from Jebel Moya was remote and separated from us by the Nile, I was able to carry on a desultory clearance of the cliff-face; but I was never able to make a measured drawing of it and my instructions for its photography were never carried out. Work on the cliff-face remained a side-line; it produced some nice minor finds, but for the reason stated above, the results cannot now be used.

Photography was always difficult. Mr. Barrett, the photographer, was at Jebel Moya; and it was not easy to detach him. I should very much have liked to have an overhead photograph of the site taken from the kite employed at Jebel Moya, for the mud walls of Abu Geili were a far more suitable subject than the graves of the mountain site. I even spoke to Mr. Wellcome of the possibility of employing a hydroplane, as it was then called, on the Nile during the next season and he seemed to regard the proposal favourably. Had not the 1914 war prevented it, we might have done so; and in any case Mr. Wellcome's kite-photographs were the first application of overhead photography to an archaeological excavation.¹ Had even one such kite-photograph been taken of Abu Geili, it would have been quite invaluable in preparing this account.

Before proceeding with the story of the actual excavations, a few words more must be said about method, if only to explain both the long delay in publication and the deficiencies which will be only too obvious in the actual account. It was Dr. Reisner's opinion that if all adequate records of an excavation were kept, publication could be deferred. This is not the place to discuss

¹ See *Jebel Moya*, vol. I, p. 6, and vol. II, Pls. XVI-XVIII.

that vexed question, but it is the place to record certain other matters. At that time, in the first half of 1914, none of us, of course, could foresee the war which began in August of that year; and we confidently expected that the excavations at Abu Geili would be resumed at the end of the year. In May, on my way back to England, I stayed for a few days with Dr. Reisner at the Pyramids, and we discussed the possibility of publishing something. We were both aware of the fact that Mr. Wellcome's mania—I do not think the word is too strong—for secrecy had given rise to much unfavourable criticism in archaeological circles. I managed without any difficulty to persuade Dr. Reisner that the early publication of a monograph on the excavation of Abu Geili was very desirable, and he agreed to use his very great influence to obtain Mr. Wellcome's consent to this proposal. It was agreed between us that such a monograph might well be written after another season's work, when it was thought that the excavation of the site would have been completed. Later on, in England, I spoke about the subject to Mr. Wellcome, and, so far as I now remember, he seemed not unfavourably disposed, though, as usual, he could not commit himself. It should be stated in passing that before I began work on the site Mr. Wellcome told me that he hoped it might be possible to finish it off in a single season. Apparently the idea was that the more men you employed the more quickly you could work. That may be true of some excavations, but it should not be true of archaeological ones. There, the more men you employ the harder you have to work yourself to keep pace with them in recording finds. I wanted to feel my way gradually, to study the soil stratification, to find out how the Egyptians, who were very skilful, were able to distinguish between the floor of a house and the earth filling. But I was never able to do this. I had to open up fresh squares and employ the hordes of diggers who kept arriving. Thus was quality sacrificed to quantity. Only occasionally could I snatch an hour between the cessation of work on the site and dusk to study the soil and its stratification. We rose at sunrise and worked before breakfast; there was an interval from 12 to 3, and work stopped, I think, at 5 or half-past. Time on the works was measured by the shadow of a pole (or, at midday, by its absence). The evenings up to 10 p.m. were occupied in writing up the innumerable records.

About the middle of March I contracted malaria, and although I continued to direct the work and keep the records until the end of the month, I then had a relapse, complicated by dysentery, and was eventually obliged to go to Jebel Moya for a few days' rest. I returned to Abu Geili on the 14th of April and resumed work. While I was ill or absent my place was taken by Middleton, but naturally, not having any archaeological experience, he could not at once get a grip of the site. In spite of this he did the best he could. Work on the main site stopped on the 21st of April; the next few days were devoted to levelling, photography, and packing. On the 30th of April I left Abu Geili for Jebel Moya.

The digging was done by Sudanese under the superintendence of Egyptian foremen trained by Dr. Reisner in his methods. Excavation was their profession; they had great skill in detecting differences of soil, in distinguishing disturbed from natural, undisturbed soil, called "gebel", in recognizing old surface-lines and living-floors, and in the delicate work of uncovering graves and grave-goods. They were as good a company of men as one could wish to have and, though loyal and conscientious, they disliked as much as I did the quantity ideals of our employer. The leader of the Egyptians at Abu Geili was Said Osman, reputed to be one of Reisner's best men—Reisner himself told me so when he visited the site. However this might have been, I did not like him,

nor he me. His normal behaviour was surly and often bordered on insolence, nor did I find him trustworthy in archaeological matters. My diary contains several records of trouble arising from this cause, the details of which (unrecorded) I have completely forgotten. I tried to get him replaced by another Egyptian, Mughherbi, but without success.

The appointment of foremen was left to the Reis, and in the course of the season one or two of the Sudanese were considered good enough to be promoted to this rank. I remember one such (Pl. VI 2) describing to me the arrangements of a room whose floor-level had been cleaned up by him; it was obvious that, being himself nearer to the primitive conditions we were revealing, he could understand them much better than I did. With education to broaden his knowledge he could have become a good archaeologist. There must be many others like him in the Sudan, and, indeed, all over the world.

Being freed from the excavator's usual anxieties—expense and the demands of subscribers—I was able to dig trial pits all round the site (*see* plan Pl. III and Fig. 2) to study the natural stratification. These pits were regarded by the Egyptians as places of exile, for they were some distance from the main dig; and because their excavation was easy the superintendence naturally was not entrusted to the most skilful workers. Owing to illness I was not able to carry out the full programme. I am sure, however, that the digging of pits, or even where necessary long trenches, in the immediate neighbourhood of a site such as Abu Geili, was justified and under other conditions would have amply repaid the labour involved. Riverine sites demand semi-geological methods of study. There are great possibilities in the application of this method to sites in Mesopotamia, such as Ur of the Chaldees. The pit policy was tolerated by Mr. Wellcome because it employed additional labour and I think he appreciated my reasons.

THE STRATIFICATION OF THE SITE

The three chief formations which were found on the site were, from below upwards, the hard conglomerate gravel, the silt of the former Nile island, and the archaeological or “human” strata.

The conglomerate is exposed at low Nile on the foreshore between the site and the river, where its level, with reference to my bench-mark, was about 46 metres. The surface was uneven and there were many pot-holes full of river-sand; I had hoped to be able to clean out some of these, for at the bottom there might well have been found some of the heavier objects from the southern half of the mound which once covered it; but this was not possible. The conglomerate consisted of a pudding-stone concretion of waterworn pebbles, some of agate, brought down by an earlier and more vigorous Nile during a pluvial period from the Abyssinian highlands. The level of the conglomerate was very constant, but it appeared to rise northwards, being found at 47·1 in a pit dug in the modern village of Abu Geili about a mile from the ancient site. Here, there rested upon it a bed of pebbles 1·5 metres thick, in the middle of which was an irregular band of sand about 0·15 metre thick. The pebble-bed was found also in Pits 5 and 7, where it was 0·30 metre thick, and in Pit 10, where it was mixed with sandy layers and was 0·60 metre thick. I think this pebble-bed is simply the top of the conglomerate, which has either disintegrated or has never hardened. It would be interesting to know the stratigraphical relationship of this conglomerate to the “limestone concretion” in which the Singa skull was found.¹

The silt is the “gebel” or undisturbed natural soil underlying the ancient village, and is the

¹ See *Antiquity*, vol. XII, 1938, pp. 190–5.

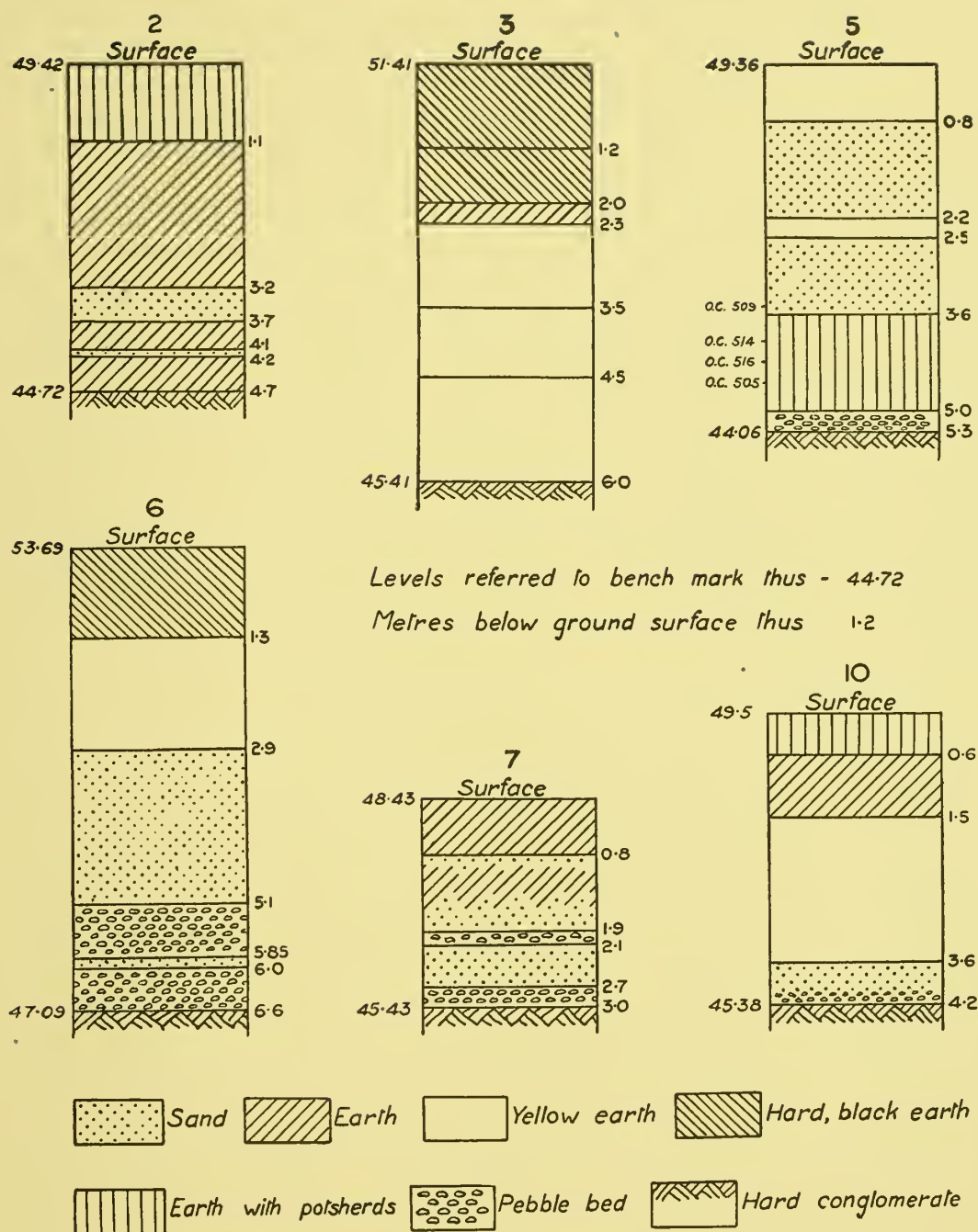


FIG. 2. Sections of trial pits

O.C. 509 = brick and two pieces of bone
O.C. 514 = 3 sherds of coarse, red, wheel-made pottery
O.C. 516 = 1 sherd of same kind of pottery
O.C. 505 = fragment of bone

mound on which the first settlers lived and in which they dug their pits. The top of the silt lies at 50·55 in R. 4, indicating a total thickness of about 4·5 metres. From this point the top slopes downwards in a northerly direction; at 12·5 metres north of A. 4, along the line A. 4–B. 4, its surface is at 46·8, indicating a total thickness there of less than a metre. If this slope be prolonged, it will be found that the silt disappears entirely at about G. 4. If, as seems certain, the present top of the mound represents the middle of the site, whose other (southern) half has been washed away, the original silt mound beneath it would have been twice its present width ($90 \times 2 = 180$ metres). The silt continues to be exposed in the right bank of the Nile below the site and the original island may possibly have been as much as a mile or more in length. It may have been formed by the deposition in relatively still water, perhaps behind some obstruction (? the conglomerate), of silt; this would most readily take place during a falling Nile, when the river would be laden with matter in suspension and the current losing force. The island theory demands that a backwater or branch of the Nile should have flowed to the north of the site, between it and the modern village, over the area where the excavators' camp was situated. In order to test this I had several pits dug (Nos. 3, 5, 7, 8, 12), but, as I have said, the pits were unpopular and some had to be discontinued. Of those just mentioned, I now find no records of 8 and 12; if I remember rightly, it was these that were discontinued before bed-rock was reached. The sections are given here (Fig. 2) as I recorded them at the time. The presence, in Pit 5, of a stratum of sand 2·80 metres in thickness may be accepted as evidence that the river once flowed over the spot. But, as so often in stratification, the section seemed to raise more problems than it solved.

CHAPTER II

THE MOUND OR VILLAGE SITE¹

APART from small outlying sites of minor importance, the main excavations were concerned with the mound-site and an extensive graveyard on its northern margin.

A detailed plan of the excavated area will be found in the pocket at the end of the volume. It will be observed that north is at the bottom of this plan (as it is in Fig. 1) instead of at the top as in Pls. II and III. The reason for this is that the camp was situated away from the river north of the site, and the approach to the excavation was from north to south. It was therefore both natural and convenient to do all large-scale plotting in such a way that the resultant plan corresponded to one's usual view of the site.

The mound-site consisted of the debris of small rooms with walls of mud or mud-brick—it was not always possible to distinguish between them—resting at the bottom on a layer of compact sandy loam. Various stages of the excavation of these rooms are illustrated in Pls. VII and VIII, and objects *in situ* on some of the floors are shown in Pls. IX to XII. The loam was 4.5 metres thick under Room 4, which was near the highest point of the eastern mound. Beneath the loam was the hard conglomerate rock. Northwards, *i.e.* away from the river, this loam thinned out and disappeared, and there can be little doubt that it was once an island in the river. The fact that both it and the present surface of the mound slope *away* from the river may seem curious to anyone unfamiliar with the site, but it is of course simply due to the fact that half of the site has been washed away—the half which must have sloped towards the river. The cliff may therefore be regarded as representing approximately the middle of the ancient island. The evidence of the first occupation came from the surface of this island, which was reached by digging down through the floors and accumulated debris of the rooms above it. This surface was “gebel”, as the Egyptians called the undisturbed natural soil; and it must not be confused with the hard conglomerate below. The gebel beneath the houses was honeycombed with pits, which were particularly numerous in the eastern part of the site; in R. 114 there was a group of eight all close together (*see* Pl. IX 2). In the bottom of a pit in R. 26 were found the remains of two pots (*see* Pl. X 3, 4), of ornamented Jebel Moya ware, decorated after burnishing but before firing. This ware belongs to the latest period at Jebel Moya, and if the pots actually came from that site—which cannot be too confidently assumed—they are unlikely to be later than the fourth century B.C. If they could be accurately dated they would provide a *terminus a quo* for the pit. Now, these pits undoubtedly represent the earliest habitation of the site, whatever their exact purpose may have been; some of them, *e.g.* the one in R. 26, were under walls and certainly earlier than the earliest houses on the site.

¹ For the sake of clearness I should here state that, for reasons stated below, I have divided the whole of the main site into two periods; I covers the whole of the mound-site (also referred to as the village-site or occupation-site) and the bulk of the objects from

it with the exception of one or two graves (*e.g.* 400/29, 400/30); II covers the cemetery. Period I ranges from a little before the Christian era (c. 200 B.C.–600 A.D.); Period II begins about the middle or the second half of the sixteenth century.

Few distinctively Napatan¹ objects were found during the excavation and, of the few, most were recovered from siftings; none were found on the floors of houses. A carnelian pendant (O. C. 526, Pl. L A 7), broken, was found in the pit in Room 4, but the Napatan *udat* (O. C. 533, Pl. L B 5) was found on “gebel” beneath the floor in Room 9. It would thus seem that the pre-house or pit period was pre-Meroitic or Napatan. It is possible that there was a break or hiatus in occupation between this first period and the building of the first mud-brick houses. The fact that the layout of the walls disregards the pits suggests a period of abandonment, but such evidence is, of course, far too scanty to prove it.

The duration of occupation of this mud-brick village cannot be estimated exactly. There is evidence of destruction and reconstruction in the form of what I have called “cross-walls” whose tops pass below the later walls built over them; but the reconstruction often seems to follow more or less the same lines as the preceding layout. Had it been permitted to excavate the site slowly and properly—“horizontally”, to use Dr. Wheeler’s word²—we should have discovered more about the relationship between the layouts; but we should not have been able to have that general conspectus of the whole site which the “quantity method”, with all its faults, has given us.

Many of the rooms contained half a dozen floors, and the storage-pots, usually in a corner, were found one above the other in the same room, confirming the fact of several periods of occupation (*see* Pls. X and XI). I was never able to subject to a searching test the ability of the Egyptians to detect a floor; but I used to question them about the matter, and I still remember how convinced they were that they could do so. This conviction was, I think, well founded, and for the following reasons:

1. They had been trained in this very art by years of work under Dr. Reisner.
2. There was no possible motive for seeing a floor where none such existed.
3. The number of floors found was about the same in a large number of the rooms, though the work of clearing them was done independently by different workers.
4. Some of the floors seemed to occur at nearly the same level *above* gebel (which had not, of course, been reached when they were so designated) in several rooms independently cleaned; for instance, a floor at about 0·5 metre above the gebel has been recorded in Rooms 98, 104, 84, 87, 88, 60, 75, 85, 45, 46, 22, 9, and 43, and probably in many others.

Evidence of the length of occupation is provided by grave 400/100, in which the bodies lay on top of the wall between Rooms 39 and 56.³ It will be obvious that when the grave was dug the occupation-surface must have been at least a metre higher, and that the wall on which the bodies lay must have been that of a house abandoned a long time before. The beads and ornaments in this grave were Meroitic, and entirely different from those found in any other grave on the site. The pottery, however, was different from that found in northern Meroitic cemeteries such as those at Karanog, Faras, or Meroë itself, and was similar to some of that found on the floors of houses. The grave may be attributed to a late period in the occupation of the village, but a period that was also certainly long anterior to the Fung cemetery. According to the orthodox

¹ The term “Napatan” is here used, as Reisner used it, to denote the period c. 750–300 B.C. when the capital of the kingdom was at Napata. Dows Dunham, however, has recently suggested (*American Journal of Archaeology*, vol. L, No. 3) that Meroë became the *de facto* administrative capital at an earlier date than Reisner had sup-

posed, and Dunham would now put the Napatan period 750–538 B.C. and the Meroitic period, divided into four phases, from 538 B.C. to A.D. 350.

² *Ancient India*, No. 3 (January, 1947), p. 143.

³ *See* below, p. 31.

view the grave-goods should not be later than the Abyssinian conquest of Meroë, in about A.D. 300 or 350; but it must be remembered that this date is based on historical and not archaeological evidence. We cannot even say that the grave must be pre-Christian, for grave-goods were buried in Christian graves lower down in the Nile Valley; nor would it help if we could, for it is not known at what date Christianity was adopted in this region. There is at present no *terminus ad quem* for the Meroitic culture; it is an assumption that it ended in A.D. 300 or 350 and that after then no "Meroitic" pottery or other typical "Meroitic" objects were made. The centuries immediately following the Abyssinian conquest are an archaeological blank, and will remain so until filled by stratigraphical excavation. I can see no reason why grave 400/100 might not be dated as late as A.D. 600, though there are no grounds for assigning it to this or any other precise date. The body was lying 0·71 metre above gebel and must have been buried from a surface at least a metre higher; and objects regarded as "late Roman" were found in adjacent rooms, on floors relatively lower than the body and nearer to gebel (*see* Figs. 3 and 4, room-sections 1 and 2).

The presence of grave-goods does not, as I have said, imply that the grave in question must be pre-Christian, for such are found in graves that must be dated after the introduction of Christianity in the region in question, and it is reasonable to suppose that the heathen customs lingered on long afterwards, here, as everywhere else. The richest grave ever found in Europe, that of Sutton Hoo,¹ was dug half a century after the mission of Augustine; and Longinus, the Augustine of Nubia, did not arrive in the southern kingdom until A.D. 579.² Pagan burials with Meroitic grave-goods would be normal up to this date and might even have been continued well into the seventh century. There is, therefore, on these grounds, no reason why our grave 400/100 might not be assigned to the late sixth or early seventh century. It is true that when Longinus arrived at the court of Alwah he found there certain Aksumites who were followers of Julian of Halicarnassus, and therefore Christians; but there is nothing at all to suggest that the kingdom itself was then Christian, which is most improbable.

There is even less reason to suppose that the Aksumite (Abyssinian) conquest of 350 B.C. or a little earlier had any marked effect on the material culture of Meroë. Such a supposition is negated by all historical and archaeological evidence. At the most a few new types would be introduced; but as practically nothing is known (apart from the German discoveries at Aksum) about the material culture of the Aksumite Kingdom, any such new types could not be detected even so. It is more reasonable to assume that what are regarded as "Meroitic" types—that is of the Meroitic period in an archaeological sense—continued for an indefinite period. There would be the usual slow changes of fashion and style, resulting eventually in new types, but no sudden break. The isolation of the Christian kingdoms caused by the irruption of Islam would have helped to preserve Meroitic cultural traditions. The truth or falsity of these propositions cannot be tested until we know something of the archaeology of the Blue Nile and adjacent regions during the early part of the Christian era; such knowledge can only be obtained from the careful excavation of a stratified inhabited site, such as Soba.

Room 4 provided evidence of several periods, and I managed to make a drawing of its south

¹ On the practice (in Europe) of interring grave-goods with Christian burials, and on the reasons for its survival, *see* Lindqvist in *Antiquity*, vol. XXII, 1948, p. 131. Lindqvist regards Sutton Hoo

as "undoubtedly Christian, prepared for a convert".

² Ugo Monneret de Villard, *Storia della Nubia Cristiana*, 1938, p. 67.

wall (inside). There was a pit 1.13 metres deep, containing “abundant traces of fire”, and on its floor, as already mentioned on p. 10, was found a fine carnelian pendant with its loop broken off. The first wall rested, apparently, on Floor 5; it had been rebuilt narrower, and then there seems

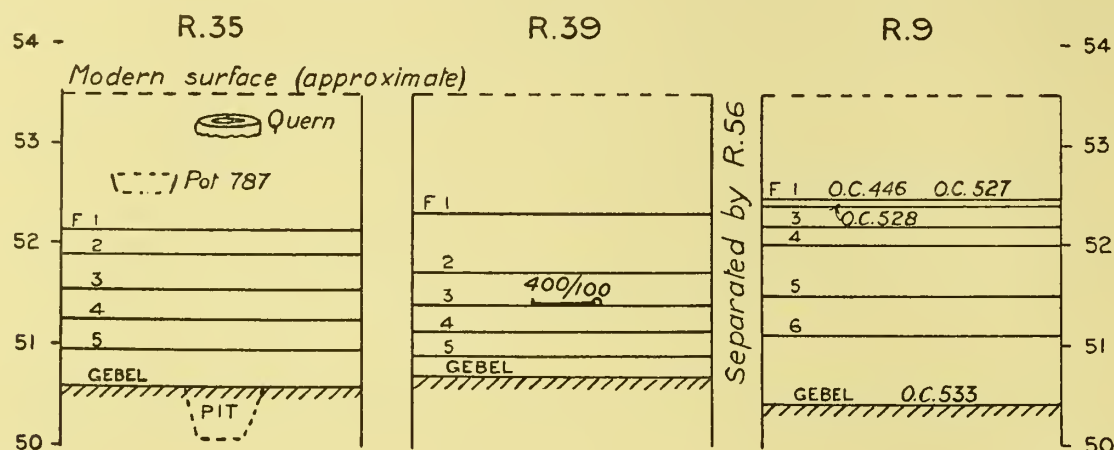


FIG. 3. Room section 1, chiefly to indicate the stratigraphical relationships of the Meroitic grave 400/100 which lay not as here shown, on a floor, but along the top of the south wall of R. 39

O.C.s 446, 527 = stone archers' looses
O.C. 528 = fragment of a late Roman glass bracelet
O.C. 533 = Napatan amulet, Pl. LB 5

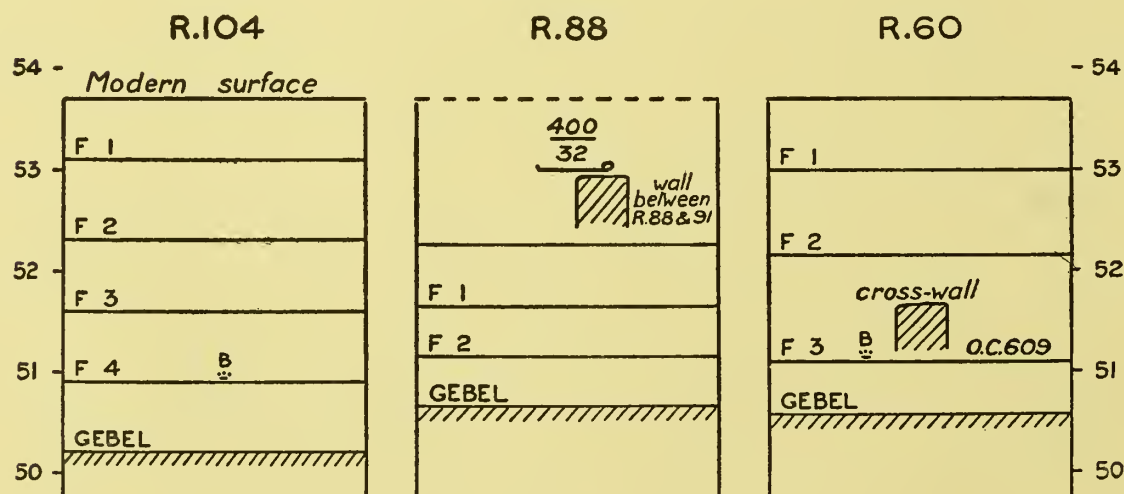


FIG. 4. Room section 2

O.C. 609 = Copper cup
B = fragments of late Roman glass bracelets

to have been destruction by fire, for the filling (preserved in the west wall) contained much charcoal and there were bricks lying on F. 3. Last came a transverse (N.-S.) wall of red baked brick (see Pl. IX 1) associated with a thick floor of hard earth (F. 2-3). There were thus at least four periods: (1) the pit period; (2) the broad wall; (3) the narrow wall; and (4) the red-brick wall. From the bottom of the red-brick wall to gebel was a thickness of 1.65 metres.

A valuable piece of dating-evidence was found on Floor 3 of Room 43. This was the lower part of a glass vessel (O.C. 599, now preserved in the Ashmolean Museum) which Mr. D. B. Harden, Keeper of the Department of Antiquities in the Ashmolean Museum, says "is undoubtedly Roman and probably of Alexandrian make and of the second or third century A.D. There are complete parallels to the form on Plate XVI of my *Roman Glass from Karanis*, Nos. 424 and 420/425, but both these are colourless glass and yours is green glass with advanced decay of a type which I call 'milky' or 'enamel-like' weathering. Your glass is, in fact, an example of my fabric 8 or 9 (p. 24), probably 8 rather than 9, in view of the shape of the vessel, though one can't be sure, as the decay obscures the texture of the glass so completely. I have dealt with the type on pp. 137-140 of my *Karanis* book."

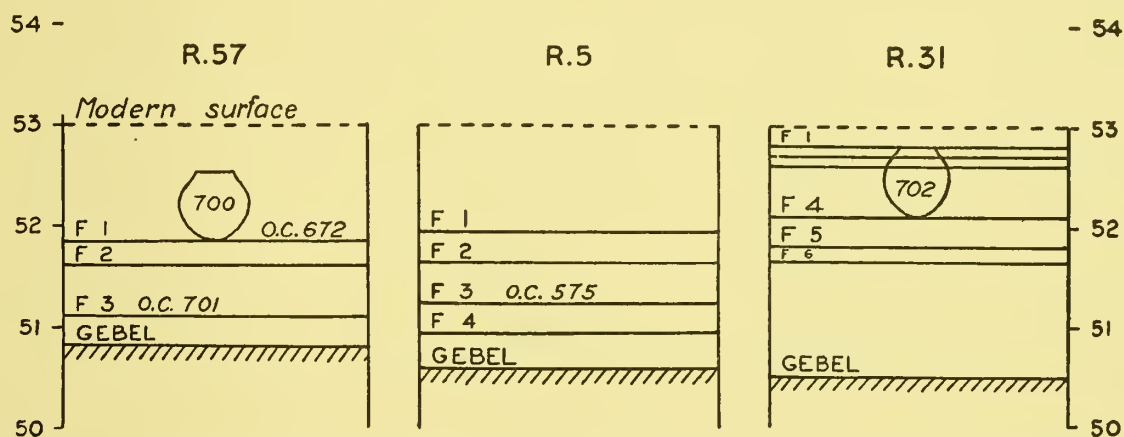


FIG. 5. Room section 3, to show the position of spindle whorls, O.C.s 575, 672; of the two big pots, O.C.s 700, 702, of the same type, and of the small bottle O.C. 701

We may, then, assign Floor 3 to the period round about A.D. 200; it lay exactly 1.0 metre above undisturbed gebel and had two other floors above it. To attempt to correlate the floor on which the Roman glass was found with the Meroitic grave 400/100 is risky, but the grave would appear to be later in date. The body seems to have rested on a surface that corresponds with R. 43, F. 3 and must, therefore, have been dug from a higher and later surface.

To sum up: There is evidence, from constructions, of three periods: (1) the pit-period, when there was occupation, probably in straw huts, on the natural surface of the then island; (2) the period of the cross-walls; (3) the period of the later walls, superimposed on the cross-walls. There is evidence, from finds, of three periods: (1) the Napatan period, which may be confidently equated with our pit-period; (2) the period round about A.D. 200, represented by O.C. 599; (3) the late Meroitic period, represented by grave 400/100. One might be tempted to equate, also, the second and third periods, but that would be unwarrantable, for R. 43, F. 3 lies at a slightly higher level than the top of a cross-wall in the next room, R. 53.¹ The cross-wall period would therefore appear to be earlier than c. A.D. 200. The Meroitic grave certainly belongs either to a late stage in our third structural period or to a fourth structural period whose remains have been utterly denuded away.

There are, therefore, not less than three periods, and probably one or two more, represented

¹ The top of the cross-wall had a level of 51.11; R. 43, F. 3 of 51.76.

in the village site. Even allowing for the rapidity of denudation, in this climate of heavy rainfall, and the consequent annual refurbishing of the houses, it would be difficult to assign much less than a century to each period, and one would prefer to assign to the whole something between 300 and 600 years. Such an estimate is little better than a guess, but it agrees fairly well with the range indicated by the finds, which suggest that the earliest may be dated a little before the Christian era and the latest after *c.* A.D. 200, but probably before *c.* A.D. 600.

A puzzling feature was the trench (Pl. IX 4) which cut through the skirts of the mound on the north and east sides. It was about 3·0 metres deep, 4·0 metres wide at the top, and 2 across the flat bottom. The sides were fairly steep. The trench seems to have been dug after the site was abandoned, but for what purpose cannot be stated.

CHAPTER III

THE CEMETERY

WHEN the mud-brick village was abandoned the roofs must have collapsed within a year or two; and it would not require many years for the rain to disintegrate the walls and reduce the whole inhabited area to a smooth, dome-shaped mound. The top of this mound must have been considerably higher than it was in 1914. Once the walls had been levelled, rain-water would run off down the sides of the mound,¹ carrying with it a quantity of fine silt that would be re-deposited at the foot of the mound. Together with the fine silt there would also be carried down, gradually and much more slowly, a trickle of larger, but still only small, objects. We should therefore expect, on purely *a priori* grounds, to find what in fact we did find—a thick stratified deposit of fine silt at the foot of the mound on the north side, away from the present river-bed. The bottom layer of this deposit would be contemporary with the earliest occupation of the mound, and the lower layers might be expected to contain not only small objects carried down from the houses by rainwash, but also, in view of its proximity, traces of occupation as well. That was exactly what was found. The lower layers contained nothing that could not be assigned to the occupation-period of the houses; and there were also found, *in situ*, some large pots (*e.g.* O.C. 649, 650) which may have stood in straw huts and must belong to the early period of the occupation of the village.²

These pots were covered by at least 2.35 metres of re-deposited silt, and, as can be seen from Pl. XVII 3, their tops were nearly on the level of the bodies in several graves (*e.g.* 400/88 and 400/94). Now it is obvious that bodies in graves must lie considerably lower than the surface of occupation at the time when the graves were dug. The problem presented, therefore, was to find that surface. Its discovery was one of the most satisfactory achievements of the whole season, and it was made in this way. One of the graves (400/82) lay exactly across the “wall” of earth (A. 4 to A. 3) left between two of the squares (*see* Pl. XVIII 1, 2). The strata above it had therefore remained undisturbed in the thickness of the “wall”, and on the 18th of March I had this earth above the grave carefully removed in my presence by Sadik Osman and Mahmoud Halil. I recorded the work as follows in my diary:

“Each layer removed was about 10 to 15 centimetres in thickness, and no trace of any disturbance [of the stratification] was found until exactly 1 metre below the surface, when the top of the grave became visible—soft earth which was a little darker and fell away from the sides of the grave. . . . This level of 1 metre below the surface is exactly the level of the floor which I had traced in the sides [of the “wall”] and drawn earlier in the morning. I recognised its existence some time ago, and suspected it when I gave the number 8 to the [excavated] soil in Square AB, 3–4 at 1 metre below surface. It was very evident there was a floor while that square was being excavated, both from the frequent occurrence of fireplaces (Pl. XIX) on that level and from the discovery (on it) of large sherds, O.C. 353, 354, of the typical black or brown incised tomb-ware, at a depth which, blindly

¹ The process of denudation must, of course, have gone on even when the site was inhabited, but probably at a much slower rate. The effect of the rainy season on a village of *tukls* is discussed in

Gleichen, *The Anglo-Egyptian Sudan*, vol. I, p. 107.

² The relation between these large pots and those of similar type found in houses in the village is discussed in the section on pottery.

recorded at the time, now proves to have been that of this one floor level. . . . This floor-level, from which 400/82 was dug, was the one occupied by the community whose graves lie beneath it.”

Most of the graves of the community were found in the low ground below the mound on its north side (away from the river). The bodies were about 1 metre, or a little more, below the contemporary surface and about 2 metres below the existing surface, as may be seen from the photographs in Pls. XVII and XVIII. These photographs, taken after the squares had been completely excavated, show the bottoms of the graves (from which the bodies have been removed) left *in situ*, the modern surface being that of the top of the “walls”. Another grave which lay across a wall is 400/26, on the line A. 4–A. 5. Its position is shown on Pl. XIX 1, and the fire-places of the contemporary occupation-level may be clearly seen in the wall above it.

In the section along line 4 (Pl. XXI) a number of graves, including 400/82, not actually on the line have been projected on to the section, and the level from which the graves were dug is indicated. It is shown by full lines where its position is reasonably certain and by dotted lines elsewhere. The bodies and objects marked on the other sections in Pl. XXI have been projected or interpolated in a similar manner.

During the time which had elapsed since the graves were dug, a thickness of about 1 metre of silt had accumulated over the contemporary surface by rainwash from the mound. Obviously, therefore, if the cemetery extended also over the top of the mound, the bodies would be found at much less depth and *nearer* to the present surface, for the top of the mound must have been lowered by rainwash since the graves were dug in it. That is exactly what we did find. Of the graves found on the mound, one (400/30) was certainly of the same period as those in the main area of the cemetery, for it contained, inverted over the elbows and frontal portion of the body, a very large flat-bottomed bowl of black incised ware (400/30/1); and the body was only 0.5 metre below the modern surface (as compared with the usual 2 metres, more or less, of those in the main area). The grave lay on the outer margin of the house-area, on the axis of the highest part of the mound. Another grave (400/29) lay partly on the top of the walls of Room 72 and contained a similar flat-bottomed bowl of black incised ware (400/29/2) and a large globular pot; and the body was also only 0.5 metre below the modern surface. Two other graves (400/1 and 400/2), the first found, which also contained pots of the same type, were found on the northern margin of the mound, 5 metres north of the wall of Room 47. This is the intermediate zone between that of denudation (the mound) and of deposition (the main cemetery); here, for the space of a few metres, the natural original surface outcrops. The two bodies were at a depth of 0.65 metre (400/1) and 0.80 metre (400/2) below the modern surface.

Other graves found on the mound contained no grave-goods, and it is safer to draw no conclusions from them. But it may be significant that one body (400/34), which lay at the unusual depth of 1.30 metres, was peculiar also in that it was buried in a semi-contracted position. A body buried in a similar position was found with Meroitic pottery in a garden north of Sennar,¹ and our grave may, like 400/100, have belonged to the period of occupation of the mound. It can hardly be contemporary with 400/29 and 400/30, for it would then have been dug to an original depth of more than 2.30 metres, which is excessive.

The graves in the main (depositional) area were dug in a stratum 2 metres thick at most,

¹ *Sudan Notes and Records*, vol. XVII, 1934, Pl. 3, opp. p. 104.

resting on undisturbed soil and gradually thinning out southwards towards the mound. Nothing found in this deposit could be regarded as contemporary with the graves; and the one datable object found in it was a small carved stone pendant, on which is carved the figure of a standing man, apparently holding a club (O.C. 548, Pl. L B 10). The motive obviously belongs to the Greco-Roman world, and the pendant probably belongs to much the same period as the glass vessel (O.C. 599). No doubt it was derived from the village, either dropped there or washed down from it. It was found in square 8, *i.e.* below the cemetery surface. Other objects from this same deposit, including many potsherds, belong to the village period. It is therefore certain, on purely stratigraphical grounds, that, when the cemetery was dug, the mound had been inhabited for a length of time sufficient to allow the formation of a deposit from it by rainwash of a stratum of 2 metres thickness. Stratigraphical evidence alone does not allow us to say that the village site had been abandoned when the cemetery was dug. Now, therefore, let us see if we can discover the date of the cemetery by means of the grave-goods.

Grave 400/10 contained a glass vessel, perfect when buried, which had been crushed into countless fragments by the pressure of a tree-root (Pl. XVI 4). There were two typical flat-bottomed bowls and many other objects. The grave was typical and its date must be that of the cemetery. Mr. Harden is "sure that the glass is post-Roman. This I judge from the metal, colour and shape, all combined. The metal and colour, of themselves, would not have made my decision so clear-cut; but the shape of the lip and rim is not a normal Roman one. It is known, I think, in mid-Arab times, say 12th to 14th century, and is certainly frequent in 16–17th century Persian glass. Fragments of similar bottles were found at Nineveh by Campbell Thompson, but when they reached the Ashmolean they had no stratification attached to them." Mr. Harden adds that dating is difficult because no one has studied post-Roman Eastern glass from the stratigraphical point of view. There is therefore a choice between, say, A.D. 1100–1400 on the one hand and A.D. 1500–1700 on the other. Of these two alternatives I prefer the second (*c.* A.D. 1500–1700) for the following reasons:

1. If the cemetery was formed before 1400 it would have been Christian and the graves orientated from east to west, whereas they were orientated head to the south and south-west.
2. It is unlikely that Christian graves would have been disposed according to what was evidently a regular and long-established ritual.¹
3. No objects which could be assigned with certainty to the earlier period (*c.* 1100–1400) were found anywhere on the site during the excavations.
4. Two coins were found, unfortunately without any precise location,² in the area between the main cemetery and the mound. One of these is a silver coin of the Turkish Sultan Murad III (A.D. 1574–1595) and was minted in Egypt. The other was a copper coin (O.C. 190) that has disappeared during the long period that has elapsed since the excavations. One side was illegible; on the other was writing, and from the drawing I made of it Mr. Walker says that it is "certainly Turkish and might well be 10th century A.H., *i.e.* 16th century A.D., and therefore contemporary with the silver one".

¹ Thus the arrangement and position of the bowls was obviously determined by a rigid convention. The position of the hands, raised in front of the face, is also a regular feature. Such things could hardly occur after centuries of Christianity.

² They were found by the boys who examined the earth sifted

from square 3, and may have come from any depth in that square. Thanks are due to Mr. J. Walker, Assistant Keeper of the Department of Coins and Medals, British Museum, for the identification of these coins.

Thus, both negative and positive evidence support the later rather than the earlier date. The orientation and burial attitudes of the bodies, moreover, suggest that the religious beliefs of the people buried in the cemetery were in a state of transition from paganism to Islam. It is probable that the orientation of the bodies was in most cases intended to be towards Mecca, yet a number were buried on their left sides, facing roughly west. This might have been the result of carelessness or indifference, or it might point to the existence of a pagan custom which still survives in the Southern Sudan¹ of burying males facing east and females facing west. (It is true that of the eleven bodies facing roughly west only seven were pronounced to be female by the physical anthropologists working in the field, whilst three were said to be male and one indeterminable; but, as mentioned on p. 31, the sexing of the bodies cannot be accepted as completely reliable.) The burial attitude with the hands in front of the face is not an orthodox Mohammedan posture, neither would one find grave-goods such as have been described in orthodox Mohammedan graves, though one might well find them in graves that belonged to a community where Islam was not yet dominant. That was exactly how matters stood in the Kingdom of Sennar in the early and middle parts of the sixteenth century. When the Fung Arab conquerors arrived at the beginning of the century "their adherence to Islam appears to have been little more than nominal, until there arrived in their midst that first generation of scholars who started a tradition of teaching and preaching".² Islam is said³ to have spread over the Gezira, our region, as the result of the teaching of Sheikh Ibrahim al Buladi, who came from Egypt early in the reign of Sheikh Agib al Mangilak, whose reign I date c. 1570–1611. It is surely a remarkable coincidence that the only object which can be exactly dated, the coin of 1574–1595, should fall precisely within this period. Agib was the dominant personality of his age and is said to have founded mosques, one of them (at Abu Khallag) on the Blue Nile above Abu Geili.⁴ By the end of his reign Islam was firmly established, and it is therefore unlikely that such unorthodox burials would have been made much, if at all, after c. 1600. On these grounds, therefore, I should tentatively assign the eastern portion of the cemetery to the later part of the sixteenth century.

I say "eastern portion" because the cemetery also extended a long way to the west. In order to determine its extent, I opened up a 20-metre square (square 16) well to the west, 160 metres from A. 5–B. 5. About forty graves were excavated, but in only two were any grave-goods found—a few small beads in 400/42 and a hammer-stone in 400/52. As may be seen from the plan, Pl. XX, the bodies were orientated slightly to the east of south; they faced, that is, towards Mecca, and much more accurately than did many of the bodies in the eastern portion of the cemetery. Considering this fact now, it seems probable that this portion of the cemetery was formed after the complete—or almost complete—conversion of the region to Islam. Even at the time, the Egyptian foremen who directed the excavation of square 16 were convinced that they were desecrating the graves of fellow Muslims, and so strong was the feeling about it that the excavation of the square was eventually abandoned. The absence of grave-goods was a contributory factor; and the state of the bones was such that removal would have been very difficult. I therefore obtained Mr. Wellcome's permission to leave the bodies in the graves—a procedure which satisfied both the Muslims and myself.

¹ e.g. amongst the Azande; see *Sudan Notes and Records*, vol. I, p. 253.

² Hillelson, *ibid.*, vol. VI, p. 204.

³ In the introduction to the *Tabaquat Wad Dayf Allah*, an

excellent and trustworthy source. I quote from Hillelson's translation, *loc. cit.*, 205.

⁴ *Sudan Notes and Records*, vol. XIII, p. 263; vol. XVII, p. 62.

The graves in this western square 16 appeared to have been dug from the present surface, which is at a level of between 50·8 and 50·9 in relation to the bench-mark, as against about 49·5 for the main group of graves to the east.¹ Square 16 lay, therefore, on a low broad ridge, if one may use the word for so slight an elevation; this fact alone, however, in so flat a region, would be quite enough to account for the absence of deposition. The graves are therefore still of their original depth and may be used to check my deduction (based on observation of strata during the excavation) of the existence in square GA, 4-5 and elsewhere of an occupation-surface—the Fung surface—from which the graves were dug. If we analyse the graves in square 16 we get the following results:

<i>Adults</i>		
<i>Depth of body below present surface</i>	<i>Numbers</i>	<i>Percentage</i>
0·40–0·79 m.	8	32
0·80–1·00 m.	15	60
1·01–1·20 m.	2	8
<i>Children (3–12 yrs.)</i>		
0·35–0·79 m.	10	71·3
0·80–0·90 m.	4	28·7

A similar analysis of the twelve graves in square GA, 4-5 reveals that the ten adults were all buried at depths between 1·01 and 1·33 metres below the Fung surface, and of the two children one was at a depth of 1·25 and the other at 0·85. These results are in sufficiently close agreement, I submit, to confirm the previous deduction. I suspect that the depths of the graves in square 16 may all have been slightly underestimated, not sufficient allowance having been made for the loose soil on the surface. In any case, a margin of 0·30 metre is hardly greater than the thickness of the top-soil in any surface. The substantial accuracy of the figures is shown by the fact that the only grave in square GA, 4-5 less than 1·0 metre in depth was that of a child.

The actual shape of the grave (or *turba*) could sometimes be seen in the soil in square 16. One of them (400/75) was a narrow rectangle with rounded corners and was only just wide enough for the body, though unnecessarily long for it. In another (400/43) the body lay, not vertically below the mouth of the grave, but in a sort of niche carved out of the side at the bottom. Niche graves, it may be observed, are still used in the pagan Sudan, in the southern part of the Fung Province, and in the Bahr el Ghazal.² A similar feature, more developed, was observed in the brick grave, Site 401, and its meaning and origin is discussed in Chapter VII. In one of the graves in square 16 (400/41) the skeleton had no head, and in another (400/68) the skeleton lay on its stomach with the head bent back and the face looking upwards, suggesting that the body had been thrown into the grave without any care, or even perhaps buried alive. The custom of burying alive survived in the provinces of Fazogli and Kordofan down to the nineteenth century.³

I feel sufficiently confident of my reasoning to apply the term “Fung” to the whole cemetery,

¹ Where the Meroitic surface was at a level of 47 metres or even a little lower. The discovery of two pots (unfortunately not described and now not identifiable) and a perfect stone mace-head (Fig. 15) at 0·25–0·35 metres below the surface in Pit 4, which is only 45 metres west of square 13, suggested that the present surface there is practically the same as in the Meroitic period. The present surface

level at Pit 4 is 49·3 metres.

² See E. E. Evans-Pritchard, *Ethnological Observation in Dar Fung, Sudan Notes and Records*, vol. XV, pp. 7, 23, and 24; also *The Bongo, ibid.*, vol. XII, p. 34.

³ Lepsius, *Letters*, 1853, pp. 221–2.

to the pottery found in it, and to the occupation-surface from which the graves were dug. This word appears therefore on the plans and sections, and will be used henceforth in this narrative.

There is nothing to indicate where the people lived who were buried in this cemetery—that they lived on the mound-site may at once be ruled out. Not far off was the important village of Bazbosh, where the caravan-route from Abyssinia reached the Nile opposite Sennar. Though mentioned by most of the early European travellers, and marked on the maps of some of them, its exact site seems uncertain, and it is not marked on the Government 1:250,000 map. But perhaps Bazbosh was a little too far off for this to have been its burying-place.

CATALOGUE OF THE GRAVES

We turn now to a description of the graves and their contents, or at least of those graves lying in the eastern part of the cemetery. No description of those in the isolated square 16 is

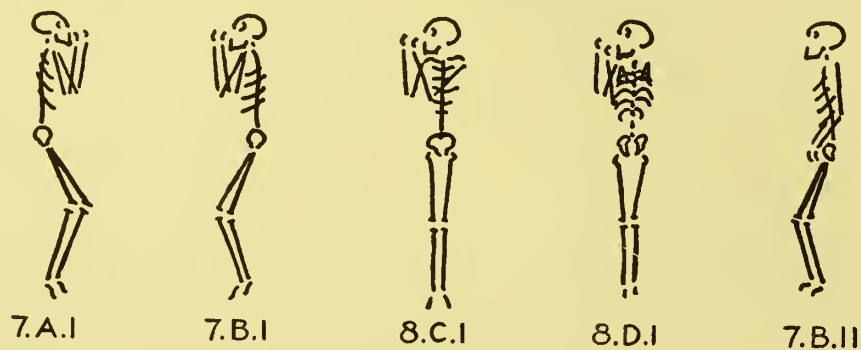


FIG. 6. Burial attitudes

necessary, because they contained no grave-goods and the burial-attitudes and orientation are sufficiently indicated in Pl. XX.

There was a good deal of uniformity both in the burial-attitude and the orientation of the bodies in the graves. They lay, for the most part, with the head roughly towards the south or south-west, and the most common burial-attitude was one in which the body was disposed on its right side, legs slightly flexed, and with the hands brought up in front of the face, as shown in Fig. 6. This attitude was found, though not very often, in the graves at Jebel Moya, and in the Jebel Moya classification was denoted by the symbol 7. B. 1;¹ this same symbol will be adopted here. There were two variants of this attitude at Abu Geili, due, possibly, less to design than to careless interment. In one of these the body, with the hands in front of the face, lay extended on its back with the head turned so as to lie on its right cheek; this is attitude 8. C. 1 in Fig. 6. In the other the body, still with the head lying on its right side and the hands in front of the face, lay stomach downwards; this is attitude 8. D. 1. Another burial-attitude which frequently occurred at Jebel Moya was found at Abu Geili in a few of the graves in squares 5, 12, 13, and 15, *i.e.* on the mound. It was also the most common attitude in the western portion of the cemetery in square 16. This is 7. B. 11 in Fig. 6, and in it the body lies on its right side with legs flexed and the hands in front of the pelvis. In contrast to the foregoing, there were several bodies lying in a posture exactly the reverse of 7. B. 1; they were, that is, lying on the *left* side with the hands in front of the face, in the attitude 7. A. 1 in Fig. 6. These have already been referred to on p. 18 above.

¹ *Jebel Moya*, vol. II, Pl. XXIV.

Nearly all the bodies in the cemetery conform to one or other of the five burial-attitudes described above and illustrated in Fig. 6, but the few exceptions are separately described in the notes which follow. The sex of the bodies is that ascribed by the anthropologists working in the field at the time of the excavation.

The present whereabouts of the objects found in the graves is shown in square brackets.

DESCRIPTION OF GRAVES

400/1. Square 1, 0.65 m. b.s.

Burial. Adult female in burial-attitude 7. B. 1 resting on "gebel". Undisturbed. Orientated head to WSW., facing SSE.

Contents

1. Near head of body and in line with it, inverted flat-bottomed oval bowl (Pl. XXXIII, type G. 24). [Khartoum]

400/2. Square 1, 0.80 m. b.s.

Burial. Adult female, extended on back, both hands raised over r. shoulder, resting on "gebel". Undisturbed. Orientated head to WSW., facing SSE. (Pl. XIII 4).

Contents

1. Inverted over abdomen, flat-bottomed bowl (Pl. XXXIII, type G. 27). [Khartoum]
2. Inverted over face, larger flat-bottomed bowl (Pl. XXXII, type G. 22). [British Museum]
3. Near l. shoulder, shell, *Aspatharia rubens*. [Khartoum]
4. Probably in filling, fragment of black-polished bowl with red-filled incised design. [Khartoum]

400/3. Square 1, 0.65 m. b.s.

Burial. Adult. Attitude 7. B. 1. Fragmentary but undisturbed. Sex impossible to determine. Orientated S., facing E.

Contents

1. In front of pelvis, pounding-stone.
2. Under femur, fragment of large wheel-made dish or stand (cf. Pl. XXXI, type W. 25) of red ware with red slip; also fragment of wheel-made pot of red ware. [Khartoum]

It is probable that these objects are intrusive in the filling of the grave and not connected with the burial.

400/4. Square 1, 1.35 m. b.s.

Burial. Adult (?) female; attitude 7. B. 1; orientated S., facing E.

Contents

1. Near head and in line with body, inverted small flat-bottomed bowl (Pl. XXXII, type G. 15). [Khartoum]
2. Inverted over front of pelvis, flat-bottomed bowl (Pl. XXXII, type G. 10). [Oxford]
3. Near forehead, *Aspatharia* shell and fragments of iron knife encrusted together. [Khartoum]
4. Under (3) an iron axe-head, type I, and pin, rusted together. [Khartoum]
5. Near wrist, fragment of rough soft-stone ring, of circular section. [Khartoum]
6. Near (3) and (4) flat iron blade (? tanged knife). [Khartoum]

400/5. Square 1, 1.35 m. b.s.

Burial. Adult male, prone and slightly on r. side; chin on l. shoulder; hands before face; l. leg straight, r. leg slightly flexed, so that the thighs are crossed. Orientated S. by W., facing E. by S. (Pl. XVI 1 and 2).

Contents

At l. elbow, lying along humerus, points towards head, 2 iron blades:

1. With a fragment of bone rusted on to it (Pl. XXIV B 7, also Fig. 9). [Khartoum]
2. With an iron pin rusted on to it (Pl. XXIV B 9 and 11, also Fig. 9). [Khartoum]

400/6. Squares 3 and 4, 0·85 m. b.s.

Burial. Adult female, supine, extended, facing left, chin on breast; l. arm raised, hand above head; r. humerus crossing lower part of face. Orientated S. by W.

Contents

1. At r. shoulder, flat-bottomed, sub-rectangular bowl, on side, mouth towards head (Pl. XXXIII, type G. 28). [Oxford]
2. Beyond (1) in line of body, whole oval flat-bottomed bowl, on side (Pl. XXXIII, type G. 26). [Khartoum]

400/7. Square 7, 1·15 m. b.s.

Burial. Resting on natural earth, adult female; burial-attitude 7. A. 1. Orientated S., facing W.

Contents

1. Upright, in front of and over pelvis, flat-bottomed bowl, complete but broken (Pl. XXXII, type G. 20). [Khartoum]
2. Upright, behind slightly bent knees, large pot (Pl. XXXIII, type XIX. 1). [Khartoum]

By forehead:

3. Iron axe-head, type I.
4. Iron tanged awl (Pl. XXIV B 8). [Khartoum]
5. Iron knife-blade.

400/8. Square 4, 0·90 m. b.s.

Burial. Child, 3–4 years; attitude 7. B. 1. Orientated SSW., facing ESE.

Contents

1. At neck, small glass, faience, and paste beads. [Khartoum]
2. Two disk-beads of ground and pierced black potsherd; all parts of necklace. [Khartoum]
3. At pelvis, 2 large faience beads similar to Pl. XLIX A 1–5. One of these has a fragment of a small long bone in its perforation. (? Part of *rahat*). [Khartoum]

400/9. Square 4, 1·20 m. b.s.

Burial. Adult female; attitude 8. C. 1. Orientated S. by E., facing E. by N. (Pl. XIV 1).

Contents

1. Inverted by head of r. femur, large pot (Pl. XXXIII, type XIX. 6). [Khartoum]
- 2 and 3. In front of face, iron implement (cf. 400/18/2) and fragments of axe-head, type I. [Khartoum]

400/10. Squares 3 and 4, 1·15 m. b.s.

Burial. Adult female; attitude 7. B. 1. Orientated S. by W., facing E. by S. (Pl. XVI 3 and 4).

Contents

1. At elbows and in front of chest, inverted oval flat-bottomed bowl (Pl. XXXIII, type G. 29). [Khartoum]
2. In front of thighs, another, broken (Pl. XXXII, type G. 11). [Oxford]
3. Upright, between (1) and (2), thin glass bottle, broken (Pl. XVI 4). [Oxford]
4. Partly coiled round (3), string of cowries. [Khartoum]
5. Under (3), iron axe-head, type I. [Oxford]

6. Three paste beads. [Khartoum]
 7. Near l. hand, chalcedony arrow-head.
 8. In a coil of (4), iron pin.
 9. Partly under (3), iron blade fragment.
 10. With (9), fragment of iron pin.
- } [Oxford]
11. Between wrist and face, quantity of small glass and paste beads. [Khartoum]
 12. On l. wrist, bracelet of 6 long faceted carnelian beads. (These have not yet [1948] been traced.)

400/11. Square 4, 1.55 m. b.s.

Burial. Adult female; attitude 7. B. 1. Orientated SW., facing SE.

Contents

1. Inverted over head, flat-bottomed bowl (Pl. XXXII, type G. 18). [Khartoum]
2. Position uncertain, half of broken *Aspatharia* shell. [Khartoum]
3. S. of head, probably in filling of grave, sherd of carinated bowl, black polished. [Khartoum]
4. Position unrecorded, fragment of iron (? tanged knife). [Not traced]

400/12. Square 4, 1.50 m. b.s.

Burial. Adult female; attitude 7. B. 1. Orientated W., facing S. (Pl. XIV 4).

Contents

1. Broken and covering upper part of body and head, sherds of large pot (Pl. XXXIII, type XIX. 4). [Khartoum]
2. Near (1) on S. side of body, *Aspatharia* shell ground to lanceolate shape. [Khartoum]
3. At toes, another shell, unground. [Khartoum]
4. At back of stomach, 2 beads: 1 red paste cylinder, 1 green glass. [Khartoum]

400/13. Squares 5 and 15, 0.35 m. b.s.

Burial. Senile male; attitude 7. B. 10. Orientated NE. by E., facing NW. by N.

No grave-goods.

400/14. Square 4, 2.00 m. b.s.

Burial. Child, (?) 7-8 years. Fragmentary and scattered. Grave only an irregularly shaped hole c. 60 cm. diameter.

Contents

Nil. Shell and fragment of brick were probably in the filling of the grave.

400/15. Square 4, 2.70 m. b.s.

Burial. Adult, fragmentary. No grave observed. Vertex of skull to N. A femur and a (?) radius lying transversely to the S. of it. (?) Re-burial.

400/16. Square 7, 1.25 m. b.s.

Burial. Child, 3-4 years; attitude 7. B. 1. Orientated S., facing E.

Contents

In front of pelvis, a number of beads, remains of a *rahat*: 5 stone, sub-spherical; 1 cowrie; 3 shell; 1 natrolite, short cylinder; 1 bone (shaft of avian long bone); quantity of small red paste, glass, faience and O.E. shell. [Khartoum]

400/17. Square 7, 1.50 m. b.s.

Burial. Adult female; attitude 7. A. 1. Orientated S., facing W. (Pl. XIV 3).

Contents

1. Inverted over head, flat-bottomed bowl (Pl. XXXII, type G. 6). [Khartoum]
2. Inverted over pelvis, another (Pl. XXXII, type G. 21). [Cambridge]
3. Inverted over feet, large bowl (Pl. XXXIII, type XVIII. 1). [Oxford]

400/18. Square 7, 1.45 m. b.s.

Burial. Adult male; attitude 8. D. 1. Orientated SW., facing SE.

Contents

1. Inverted over head of l. femur, flat-bottomed bowl (Pl. XXXII, type G. 7). [Oxford]
2. Near l. hand, iron axe-head, type I, with fragments of another iron implement encrusted on to it (shown detached in Pl. XXIV B 3 and 12, also Fig. 9). [Oxford]
3. At l. shoulder, spherical granite hammer-stone or pounder. [Oxford]

400/19. Square 7, 1.42 m. b.s.

Burial. Fragmentary remains of (?) dog.

400/20. Square 7, depth uncertain.

Burial. Adult male; attitude 7. A. 1. Orientated S., facing W.
No grave-goods.

400/21. Square 7, 1.55 m. b.s.

Burial. Senile male; attitude 7. A. 1. Orientated S. by E., facing W. by S.

Contents

1. At vertex of skull, 2 *Aspatharia* shells with ground edges. [Cambridge]
2. At occiput, 2 iron axe-heads, type I, and part of a tanged knife, rusted together. [Cambridge]

400/22. Square 7, 1.00 m. b.s.

Burial. Skull and cervical vertebrae only of adult (?) male, lying on r. side, vertex to W., facing S. Vertebrae, in natural relation to the skull, curve vertically downwards into the soil. No other bones.
No grave-goods.

400/23. Square 7, 1.50 m. b.s.

Burial. Adult male; supine, chin on l. shoulder; arms fully flexed; l. forearm and hand on chest, fingers extended towards r. shoulder; r. forearm with hand supinated and extended fingers nearly touching those of the l.; legs fully extended (Pl. XV 1 and 2). There was an exostosis on the medial side of the middle of the shaft of the r. femur. Orientated S. by W. facing W. by N.

Contents

1. By l. shoulder, point in front of face, a large tanged iron spear-head (Pl. XXV 5; Pl. XXVI 1, and Fig. 7). [Khartoum]
2. By l. hip, an iron axe-head, type II (Pl. XXIV A 4, also Fig. 8e). [Khartoum]
3. On r. wrist, an iron bracelet (Pl. XXVI 2). [Khartoum]
4. Round waist, a string of beads, mostly faceted carnelian, type T. 3. f, Fig. 13. [Khartoum]
5. Between (2) and the l. hip, a large ground *Aspatharia* shell. [Khartoum]
6. In a double row, running sagittally from the nape of the neck to the frontal region, a quantity of ground cowries, once stitched on to form the ridge, or crest, of a (?) leather) helmet. [Khartoum]
7. Long iron pin (Pl. XXV 4). [Khartoum]

400/24. Square 7, 1·80 m. b.s.

Burial. Adult male; attitude 7. A. 1. Orientated SSW., facing WNW.

Contents

1. Inverted over skull, large open-mouthed pot (Pl. XXXIII, type XVIII. 2). [Khartoum]
2. Above hands, iron axe-head, type I (Pl. XXIV B 6, also Fig. 8a). [Khartoum]
3. At elbows, below bones of r. forearm, stone pounder. [Khartoum]
4. Probably in the filling, a number of beads: 1 quartz, faceted; 2 beryl, short cylinder; a dozen black paste, short cylinder. [Khartoum]

400/25. Square 8, 1·20 m. b.s.

Burial. Adult male; attitude similar to 7. B. 1, but l. tibia crossed over r. Orientated SSE., facing ENE.

Contents

1. By r. forearm, iron axe-head, type I (Pl. XXIV B 4, also Fig. 8c). [Khartoum]
2. U-shaped ring of lead with expanded ends, use unknown. [Khartoum]
3. Gall-stone found *in situ*, 1·1 cm. diam. [Khartoum]
4. Near forearms, an iron (? knife) blade and an iron staple and ring (Pl. XXIV B 10, also Fig. 9). [Khartoum]
5. In front of face and chest, broken in two halves when buried, flat-bottomed bowl (similar to Pl. XXXII, type G. 6). [Khartoum]

400/26. Squares 9 and 19, 1·85 m. b.s.

Burial. Adult male; attitude 8. C. 1. Orientated S., facing E.

Contents

1. Inverted over l. shoulder, flat-bottomed bowl (Pl. XXXII, type G. 9). [Khartoum]
2. At vertex of skull, iron axe-head, type I (Pl. XXIV B 2). [Cambridge]

400/27. Square 7, 1·90 m. b.s.

Burial. Adult male, prone, face down and slightly to the r.; arms fully flexed, hands to r. of head, which is bent to the l.; legs fully extended. Orientated WSW. (Pl. XV 3 and 4).

Contents

1. To r. and parallel with body, point in line with forehead, an iron leaf-shaped socketed spear (Pl. XXV 1, also Fig. 7). [Khartoum]
2. Round hips, a girdle composed of 4 strings of ground cowries. [Khartoum]
3. Between (1) and the r. wrist, iron axe-head, type I, with basket- or mat-impression in rust. [Khartoum]

400/28. Square 8, 1·40 m. b.s.

Burial. Adult male; attitude 7. B. 1. Orientated SW. by W., facing SE. by S.

Contents

Fragment of axe-head, type I. [Peabody]

400/29. Square 5, 0·50 m. b.s.

Burial. Adult female; attitude 7. A. 1. Orientated WSW., facing downwards and slightly to r. (Pl. XIV 2)

Contents

1. On its side, over pelvis, mouth to NE., large jar (Pl. XXXIII, type XIX. 5). [Oxford]
2. Inverted over r. femur, flat-bottomed bowl, similar in decoration to Pl. XXXII, type G. 15. [Oxford]
3. In filling, fragments of iron. [Oxford]
4. In filling, quantity of small beads: glass, paste, O.E. shell, of usual types. [Oxford]

400/30. Square 13, 0·50 m. b.s.

Burial. Adult male; attitude 7. B. 1. Orientated S., facing E. (Pl. XIII 3).

Contents

1. Inverted over elbows and abdomen, flat-bottomed bowl (Pl. XXXII, type G. 14). [Khartoum]

400/31. Square 12, 0·80 m. b.s.

Burial. Child, 5–6 years; on l. side; r. hand raised in front of face, l. hand at pubic region; thighs and legs half flexed. Orientated WSW., facing NNW.

No grave-goods.

400/32. Square 12, 0·70 m. b.s.

Burial. Adult female; attitude 7. B. 10. Orientated S. by E., facing E. by N.

No grave-goods.

400/33. Square 13, 1·30 m. b.s.

Burial. Adult female; attitude 7. B. 10. Orientated N. by W., facing W. by S.

No grave-goods.

400/34. Square 15, 1·60 m. b.s.

Burial. Adult male; trunk supine, head to r., chin on r. shoulder; L arm half-flexed across chest, hand before face; r. arm three-quarters flexed, hand alongside other; thighs quarter-flexed, legs three-quarters flexed, knees to r. Orientated E. by N., facing N. by W.

Contents

In filling, 3 beads. [Khartoum]

(*Note.* Compare the burial in garden c. 500 m. N. of Sennar, *Sudan Notes and Records*, vol. XVII, 1934, Pl. 3, opp. p. 104 (Arkell), which had a skeleton in the same posture but with pottery of a Meroitic or post-Meroitic type.)

400/35. Square 15, 0·35 m. b.s.

Burial. Young female, 16–17 years; attitude 7. B. 1. Orientated SE. by S., facing SE. by E.

No grave-goods.

400/36. Square 12, 1·00 m. b.s.

Burial. Adult female; attitude 7. B. 10. Orientated S. by E., facing E. by N.

No grave-goods.

400/37. Square 12, lower part of body resting on wall between R. 87 and R. 74.

Burial. Adult male; attitude 7. B. 10. Orientated S., facing E.

No grave-goods.

400/38. Square 12, a few centimetres above floor in R. 74.

Burial. Child, 4–5 years; on l. side; l. arm three-quarters flexed, forearm supinated, wrist flexed and fingers in front of mouth; r. arm half-flexed, hand in front of abdomen; thighs and legs flexed. Orientated WSW., facing NNW.

No grave-goods.

400/39. Square 8, 1.35 m. b.s.

Burial. Adult female; attitude 7. A. 1. Orientated W. by S., facing N. by W.

Contents

At r. elbow, *Aspatharia* shell.

400/41. Square 8, 1.70 m. b.s.

Burial. Adult male; prone; cranium missing but mandible and atlas *in situ*, showing that the head was present originally at burial, neck bent back and turned slightly to the r.; l. arm extended at side, forearm and hand pronated; r. shoulder raised, forearm half-flexed, r. hand below abdomen; legs extended. Orientated E., facing SE.

No grave-goods.

400/48. Square 8, 1.85 m. b.s.

Burial. Adult, sex undeterminable. Attitude 7. B. 1. Orientated SW., facing SE.

Contents

1. Covering head, 2 large sherds, broken before burial, of flat-bottomed bowl (Pl. XXXII, type G. 8). [British Museum]
2. At elbows of upraised arms, 3 *Aspatharia* shells, 2 with edges ground, 1 unground. [Broken and discarded]

400/71. Square 7, depth uncertain.

Burial. Adult female; attitude 8. D. 1. Orientated S. by W., facing E. by S.

Contents

1. Inverted at l. hip, unbroken flat-bottomed bowl (Pl. XXXII, type G. 12). [British Museum]
2. Close to upraised forearms, resting perpendicularly in the soil, a large iron axe-head, type II (Pl. XXIV A 3). [British Museum]
3. Near wrist, a number of beads. [British Museum]

400/82. Square 20, 1.90 m. b.s.

Burial. Adult female; attitude 7. A. 1. Orientated SW. by S., facing NW. (Pl. XIV 5).

Contents

1. Inverted over head, large oval flat-bottomed bowl, similar to Pl. XXXII, type G. 15, but larger.
2. Beneath (1) and over face, a smaller oval bowl, decoration not visible.
3. Above upper part of body, mouth towards the head, a large wide-mouthed pot with slightly everted rim, similar to Pl. XXXIII, type XIX. 3.
4. Above pelvis, mouth towards the head, another, smaller pot (Pl. XXXIII, type XIX. 3). [Oxford]
5. Near r. wrist, 2 *Aspatharia* shells. [Oxford]

Note: The pots Nos. 1, 2, and 3 have not yet (1948) been traced.

400/83. Square 10, R. 12, F. 2.

Burial. Adult female; prone, face to l.; l. arm at side; r. arm extended underneath trunk, hand at pubic region; legs slightly flexed. Orientated SSE., facing ENE.

No grave-goods.

400/84. Square 19, 1.55 m. b.s.

Burial. Young female, c. 16 years; attitude 8. C. 1. Orientated S. by W., facing E. by N. (Pl. XIII 2).

Contents

1. Covering upper half of body and neck, inverted flat-bottomed bowl, similar to Pl. XXXII, type G. 2 [Khartoum]
2. Below, and in contact with, r. femur, iron ring (? bracelet) (Pl. XXIV A 5). [Khartoum]
3. At l. forearm, a few small beads.

400/85. R. 10, F. 6.

Burial of dog in pit. Bones broken and bundled together in confusion. Probably tied up in cloth or basket when buried. Must have consisted of bare bones before this.

400/86. Square 19, 1.60 m. b.s.

Burial. Adult female; attitude 8. C. 1. Orientated S. by E., facing E. by N.

Contents

1. Inverted over l. hip and side, flat-bottomed bowl (Pl. XXXII, type G. 13). [Khartoum]
2. Inverted over legs, large pot (Pl. XXXIII, type XIX. 2). [British Museum]
3. On l. elbow, *Aspatharia* shell. [British Museum]

400/87. Square 19, 1.65 m. b.s.

Burial. Adult female; attitude 7. B. 1. Orientated W. by S., facing SW.

Contents

1. *Aspatharia* shell behind l. shoulder. [Institute of Archaeology]
2. Position not stated, iron axe-head, type I (Pl. XXIV B 1, also Fig. 8b). [Institute of Archaeology]

400/88. Square 19, 1.80 m. b.s.

Burial. (?) Female child, c. 12 years; attitude 7. B. 1. Orientated WSW., facing SSE. (Pl. XIII 6).

Contents

1. Inclined over forehead, flat-bottomed bowl (Pl. XXXII, type G. 5). [Khartoum]
2. Inverted over shins, another, slightly smaller, similar to Pl. XXXII, type G. 7. [Khartoum]
3. At pelvis, number of beads, remains of a *rahat*: 2 large faience (as Pl. XLIX A 1-5); 3 large red paste cylinders (as Pl. XLVII A 7 and 8); 1 bone cylinder, with bands of carved hatching at ends. [Khartoum]

400/89. Square 19, 1.70 m. b.s.

Burial. Adult male; attitude 8. D. 1. Orientated S., facing downwards and E. (Pl. XIII 5).

Contents

1. On its side at vertex, mouth towards skull, flat-bottomed bowl, similar to Pl. XXXIII, type G. 19. [Peabody]
2. Inverted over knees and shins, another, large, similar to Pl. XXXII, type G. 3. [Peabody]
3. At elbows, an iron axe-head, type I. [Peabody]
4. By hands, parallel with body and point in line with forehead, a small socketed spear-head (Pl. XXV 2, and Fig. 7). [Khartoum]

400/90. Square 19, 1.75 m. b.s.

Burial. Adult male; attitude 7. B. 1. Orientated S., facing E.

Contents

1. Inverted over head, flat-bottomed bowl (Pl. XXXII, type G. 4). [Khartoum]
2. At l. elbow, flat iron axe-head, type II (Pl. XXIV A 1, also Fig. 8d).
3. Under (1) and behind head, small tanged spear-head (Pl. XXV 3 and Fig. 7). [Khartoum]

400/91. Square 19, 1.75 m. b.s.

Burial. Adult male; attitude 8. D. 1. Orientated S. by E., facing E. by N. (Pl. XIII 1).

Contents

1. Inverted over head, flat-bottomed bowl (Pl. XXXII, type G. 2). [British Museum]
2. At l. elbow, broken iron blade, possibly axe-head, type I. [British Museum]
3. Other iron fragments, unrecognisable. [British Museum]

400/92. Square 19, 1.80 m. b.s.

Burial. Adult male; attitude like 7. B. 1, but l. femur crossed over r. Orientated S. by W., facing E. by S.

Contents

1. Inverted over pelvis and lower part of body, large flat-bottomed bowl (Pl. XXXII, type G. 16). [Oxford]
2. Below (1) inverted in front of pelvis, small undecorated flat-bottomed bowl (Pl. XXXII, type G. 23). [Cambridge]
3. At l. elbow, iron axe-head, type II (Pl. XXIV A 2). [Oxford]

400/93. Square 19, 1.90 m. b.s.

Burial. Adult male; attitude 8. D. 1. Orientated S. by W., facing E. by S.

No grave-goods.

400/94. Square 19, 1.75 m. b.s.

Burial. Adult male; prone and slightly on l. side; head turned to r.; arms at sides, hands at pubes, beneath pelvis; legs extended, r. ankle crossed over l. Orientated SW., facing NW.

No grave-goods.

400/95. Square 19, 1.90 m. b.s.

Burial. Adult female; attitude 7. B. 1. Orientated SSW., facing ESE. (Pl. XIV 6).

Contents

1. Inverted over hands and forehead, flat-bottomed bowl (Pl. XXXII, type G. 19). [Khartoum]
2. Behind head, shoulders, and back, fragments of another, very large, evidently broken at burial (Pl. XXXII, type G. 1). [Khartoum]
3. Iron axe-head, type I (Pl. XXIV B. 5). [Peabody]
4. Over forearms, 2 *Aspatharia* shells with ground edges. [Peabody]

400/96. Square 19, 1.85 m. b.s.

Burial. Adult female; attitude 7. A. 1. Orientated E. by N., facing S. by E.

No grave-goods.

400/97. Square 20, 1.85 m. b.s.

Burial. Adult female, undisturbed save as below; attitude 7. A. 1. Orientated S. by W., facing W. by N. First and second ribs of r. side are bodily displaced (found over r. elbow) and others thrown out of position. A cervical vertebra lies close to the vertex. Probably disturbed by burrowing animal.

Contents

1. Inclined over hands and face, flat-bottomed bowl with decoration, similar to Pl. XXXIII, type G. 27, but more roughly decorated. [Institute of Archaeology]
2. Standing at feet, wide-mouthed pot, similar to Pl. XXXIII, type XIX. 1. [Institute of Archaeology]
3. At wrist, under pot, number of small beads. [Institute of Archaeology]

400/98. Square unknown.

Burial. Very much decayed adult skeleton, sex not determinable; attitude 7. A. 1. Orientated S. by W., facing W. by N.

Contents

1. Inverted over face, small flat-bottomed bowl similar to Pl. XXXII, type G. 17.
2. Inverted over abdomen, another, larger (Pl. XXXII, type G. 17). [Khartoum]
3. (?) In filling, a large number of small glass and paste ball beads. [Khartoum]
4. In filling, fragments of axe-head, type I. Also large quantity of iron fragments, subsequently fitted together to form a spear-head (Pl. XXVI 3 and Fig. 7). [Khartoum]

400/99. Square 20, 1.85 m. b.s.

Burial. Complete hindquarters of (?) crocodile, consisting of pelvis, with some lumbar and caudal vertebrae, hind limbs, and extremities; all in natural relative positions. Orientated head to N.

400/100. Square 11, on wall between Rooms 39 and 56 (Pls. XXII and XXIII).

Burials. Two children, remains very much decayed and lower parts of bodies missing:

- (A) On l. side, r. hand apparently at pubes, l. hand extended towards 400/100/4. Legs missing.
- (B) Probably supine, lower part of trunk and legs missing.

Contents

1. Base of large thick pot, of coarse red ware, partly under body A. (Probably antedates the burials.)
 2. Plain bowl of black ware with cross inside in centre of bottom (Pl. XXVII, type II. 2). [Khartoum]
 3. Cup of black ware with incised notches on the rim (Pl. XXII B 1 and Pl. XXVIII, type V. 3). [Khartoum]
 4. Large bowl, black polished, with a red-filled incised scroll (Pl. XXII B 7 and Pl. XXVIII, type VII. 5). [Khartoum]
 5. Inverted over (9) dish of red wheel-made ware with small flat base (Pl. XXII B 2 and Pl. XXXI, type W. 1). [Khartoum]
 6. Plain gourd-shaped flask, black ware (Pl. XXII B 3 and Pl. XXIX, type XI. 9). [Khartoum]
 7. Gourd-shaped flask, as above, but larger and with combed and red-filled fillet and pendant design (Pl. XXII B 6, and Pl. XXIX, type XI. 10). [Khartoum]
 8. Bowl of black ware with red-filled decoration (Pl. XXII B 5 and Pl. XXVIII, type V. 1). [Khartoum]
 9. Inverted over (10), plain cup like (3) with notched rim (Pl. XXII B 4 and Pl. XXVIII, type V. 2). [Khartoum]
 10. Under (9), iron "hoe" (Pl. XXIII 4 and Fig. 16). [Khartoum]
 11. String of quartz pendants (necklace of body A) (Pl. XXIII 1). [Khartoum]
 12. String of lenticular quartz beads (necklace of body B) (Pl. XXIII 1). [Khartoum]
 13. Two silver (? plated) ram-headed bracelets, one associated with each body, probably *in situ* on wrists at burial (Pl. XXIII 2 and 3). [Khartoum]
- 400/101. R. 45, F. 1.

Burial. Fragmentary, on l. side. Sex not determinable. R. arm at side, slightly flexed; thighs slightly flexed, legs three-quarters flexed. Orientated SW., facing NW.

No grave-goods.

FUNG GRAVE-GOODS

All the objects found in the graves of the main group may be regarded as contemporary in an archaeological sense, and as forming a closed group, characteristic of the culture of the period to which they belong. They are therefore important as type-fossils which can be used by future excavators, and that holds good whatever opinions may be held about the absolute date of the group.

The pottery, the beads, and the glass vessel (400/10/3) are dealt with elsewhere. It remains to describe the other objects, which may be classified according to material.

STONE

Arrow-heads. An arrow-head of transparent quartz (400/10/7) was found near the left hand in the grave which also contained the glass vessel. It is certain that this was intentionally buried with the body and not a chance object already in the soil; but it does not prove the use of stone arrow-heads at the date of the burial. There is no inherent improbability that they were so used; there are parallel instances from other graves, *e.g.* the tomb of Shubad at Ur, in which broad-edged arrow-heads (still mounted on the shafts) of a Mesolithic type were found. Arrows, being so easily lost, were often tipped with stone long after metal was in use, but while it was still a rare and valuable substance. This stone arrow-head may have been an amulet.

Four other stone arrow-heads (O.C. 111, 112, 300) were found during the excavations, all from square 1 and without any definite associations. O.C. 300 is broken and is the point of a narrow, leaf-shaped blade. O.C. 111 has a concave base with barbs, and O.C. 112 (two) seem to be other examples of the same type.

There were also found, in squares 1, 2, and 4, several small tanged iron objects classified as iron arrow-heads. One of these (O.C. 18, Pl. LIII A 12) can hardly be anything else; it has a long tang and a small triangular blade. O.C. 17 is like it. These may conceivably belong to the Fung period, but the arrow-heads with one barb are probably much earlier in date and are to be assigned to Period I of the site (*see* Chapter VI).

Hammer-stones. A round hammer-stone of granite was found at the elbows of 400/52 and another (diam. 75 mm.) between the shoulder and wrist of 400/18. Under the forearm and near the elbow of 400/24 was found a natural pebble of greenstone probably used as a hammer, to which the bones of the arm still adhered. All three objects appeared to be contemporary grave-goods. Such hammer-stones are in use at the present day and have been in use from the earliest times. Several others were found at Abu Geili and they occurred in very large numbers at Jebel Moya. As such objects are not typical of the Fung—or any other—period, the remaining hammer-stones from Abu Geili are dealt with in Chapter VI.

Rings. Part of a ring of soft stone was found near the wrist of the body in 400/4, but it is not certain that it belonged to the grave; it is perhaps more likely that it belonged to the soil in which the grave was dug. Many stone rings were found elsewhere on the site and they, too, are dealt with in Chapter VI with the other stone objects.

SHELL

Mussel shells (*Aspatharia rubens*) were found in the following graves: 400/2, 400/4, 400/11, 400/12, 400/21, 400/39, 400/48, 400/82, 400/86, 400/87, 400/95. The positions in which the shells were found are indicated in the Description of Graves.

These shells were certainly used for at least three different purposes, as will be seen below, and seem to have been used by women, for in only one out of the above eleven examples were any found with a male skeleton, and the sex-identification of that is doubtful.¹ Were those whose edges had been ground used for scraping the body? The *dilka* was a famous institution at Sennar and survived the Turkish conquest.²

¹ These age and sex determinations were made by Dr. Oldham before the bodics were removed from their graves. He would, I am sure, be the first to admit their provisional character.

² For a description of it see P. Trémaux, *Voyage au Soudan*, Paris, 1853.

Many more shells, or portions of them, were found elsewhere on the site. O.C. 578, from square 13, has a serrated edge. O.C. 444 (broken) has in it the remains of red powder or paint and was found "above the top floors" in square 11. Neither of these finds is datable, and it seems probable on *a priori* grounds that the shells would have been put to the same practical use in all periods.

Small shells used as ornaments and not belonging specifically to the Fung period are dealt with on p. 88.

IRON

Nearly all the iron objects from the graves fall into one or other of the following classes: (1) spear-heads, (2) axes, (3) rings (one certainly a bracelet), (4) pins, (5) tanged knives with one or two edges.

Most of them, it will be seen, are weapons. These objects are listed below under their various headings, but owing to the removal of some objects with the bodies and their consequent loss (foreseen at the time), the list may not be complete. Type-drawings of the various classes are given in Figs. 7-9, and photographs of some of the individual objects may be seen in Pls. XXIV-XXVI.

It will be well to preface a description of these objects by some account of the state of preservation in which they were found. Some, especially those of thin metal, were comparatively well preserved, but some of the heavier objects had split up into a series of laminae, each of them corroded on both surfaces, and the whole mass held together by rust. Others, again, had disintegrated into warped and corroded flakes. This splitting and disintegration was probably brought about by defective forging in the first instance. The weapon was evidently worked up by hammering together a series of thin plates and the operation may have been carried out at too low a temperature—at a red instead of a white heat—or possibly the smith was not sufficiently careful to beat off all the scale and slag. In any event, it is clear that a thin film of oxide must have been left between the laminations of the forging, though doubtless this was not apparent at the time and would not become so during the lifetime of the owner of the weapon. But, during the centuries the object lay buried, corrosion gradually extended along the films already in existence, with the result we see to-day.

1. Spear-heads. Five spear-heads—or, more correctly, four and some fragments—were found, three of them socketed and two of them tanged.

The best preserved of them is the large socketed spear-head, 57 cm. (22.4 in.) long, found with the body in grave 400/27. It is shown *in situ* in Pl. XV 3 and 4, in the drawing Fig. 7, and in the photograph Pl. XXV 1; no description is therefore necessary. It resembles the spears used to-day by the Shilluk, but is somewhat larger and heavier.

A smaller socketed spear-head is that from grave 400/89, No. 2 in Pl. XXV and shown in the drawing Fig. 7. This, although completely corroded, is still of recognisable shape. Such was not the case with the third spear-head, that from grave 400/98. This had so completely disintegrated that it was not recognised as a spear-head at the time of excavation; only several cardboard boxes of flakes and fragments were dutifully preserved. These were opened in the course of a routine examination of the material in 1947, and Mr. Cornwall patiently and skilfully fitted sufficient of the fragments together to show that they were the remains of a heavy spear-head of unusual

thickness. This may have been an implement of the chase rather than of war. A reconstruction of it is shown in the drawing Fig. 7, and the remains, as pieced together, in the photograph Pl. XXVI 3. On the socket and elsewhere along one side of the object are the impression and, in places, the actual remains of a woven mat (see below) and inside the socket are traces of the wooden shaft. The fragments of the spear-head had not only rusted but warped, so that when they were stuck together by their edges the central rib, which had split along its length, appeared not as a rib but as a channel. The original length of the weapon is, of course, uncertain, but, as reconstructed, it is about 49 cm. (19.3 in.) long.

The tanged spear-heads are from graves 400/23 and 400/90. The latter (Pl. XXV 3 and Fig. 7) is of thin metal and in a fairly good state of preservation. It has a comparatively short tang and would not have been a particularly serviceable weapon on account of the difficulty of securing it firmly to the shaft.

The spear-head from grave 400/23 is of quite exceptional size, being 63 cm. (24.8 in.) long. It is shown *in situ* in Pl. XV 1 and 2. It was taken up with part of the body,¹ and when unwrapped in 1947 large portions of it consisted of mud-encrusted flakes, most of them already detached and the rest detachable at the slightest touch. It was photographed first with the loose flakes removed, in order to show the central rib (Pl. XXV 5). Then Mr. Cornwall stuck on as many of the flakes as could be fitted, with the result shown in Pl. XXVI, which gives a good idea of the original shape of the spear-head and enabled the drawing in Fig. 7 to be made. (As the object had been treated with melted wax in 1914 it was not possible to remove all the earth adhering to the flakes with the laboratory equipment available. The reconstruction was undertaken simply in order to recover the shape of the object and not to prepare it for permanent exhibition in a museum.)

Several of the fragments of this spear-head bore not only mat-impressions but portions of matting, even better preserved than those on the object from grave 400/98 described above. One of these fragments is shown in Pl. XXVI 1a. The mat appears to be a *birsh* (palm-leaf) mat, not essentially different from those in use to-day, although of somewhat finer weave. Similar but less pronounced mat-impressions were found on the spear-head from grave 400/27 and also on objects from some of the other graves. It seems probable, then, that the bodies were laid on, and perhaps covered with, fibre mats at the time of burial.

It will be observed that the tang of the spear-head from grave 400/24 is short for so heavy a weapon, and would require a shaft of such thickness that the complete spear would be unwieldy. The possibility cannot, therefore, be excluded that the object was not a weapon of war but an elephant-spear of the kind used in a trap. This, heavily weighted, is suspended from a branch of a tree and released by a "trip" by the animal itself as it is about to pass underneath.

2. Axes. There were two main types of axes. The kind more often found were very light implements of which variants are shown in Fig. 8 *a, b, c*, and in Pl. XXIV B 1 to 6; for convenience they will be referred to as type I. They are flat and of thin section and might, perhaps, be regarded as halberds, but they would not appear to have been particularly lethal weapons unless firmly embedded in a heavy, club-like shaft. Mr. A. J. Arkell informs the writers that there is, in the Khartoum Ethnological Museum, a very similar object mounted in precisely this manner and

¹ Although I protested most strongly against this practice, I could not persuade Mr. Wellcome to abandon it. I could not, however, bring myself to allow the fine spear-head from grave 400/27 to be

thus sacrificed in the supposed interests of physical anthropology and I therefore removed it without saying so. (O. G. S. C.)

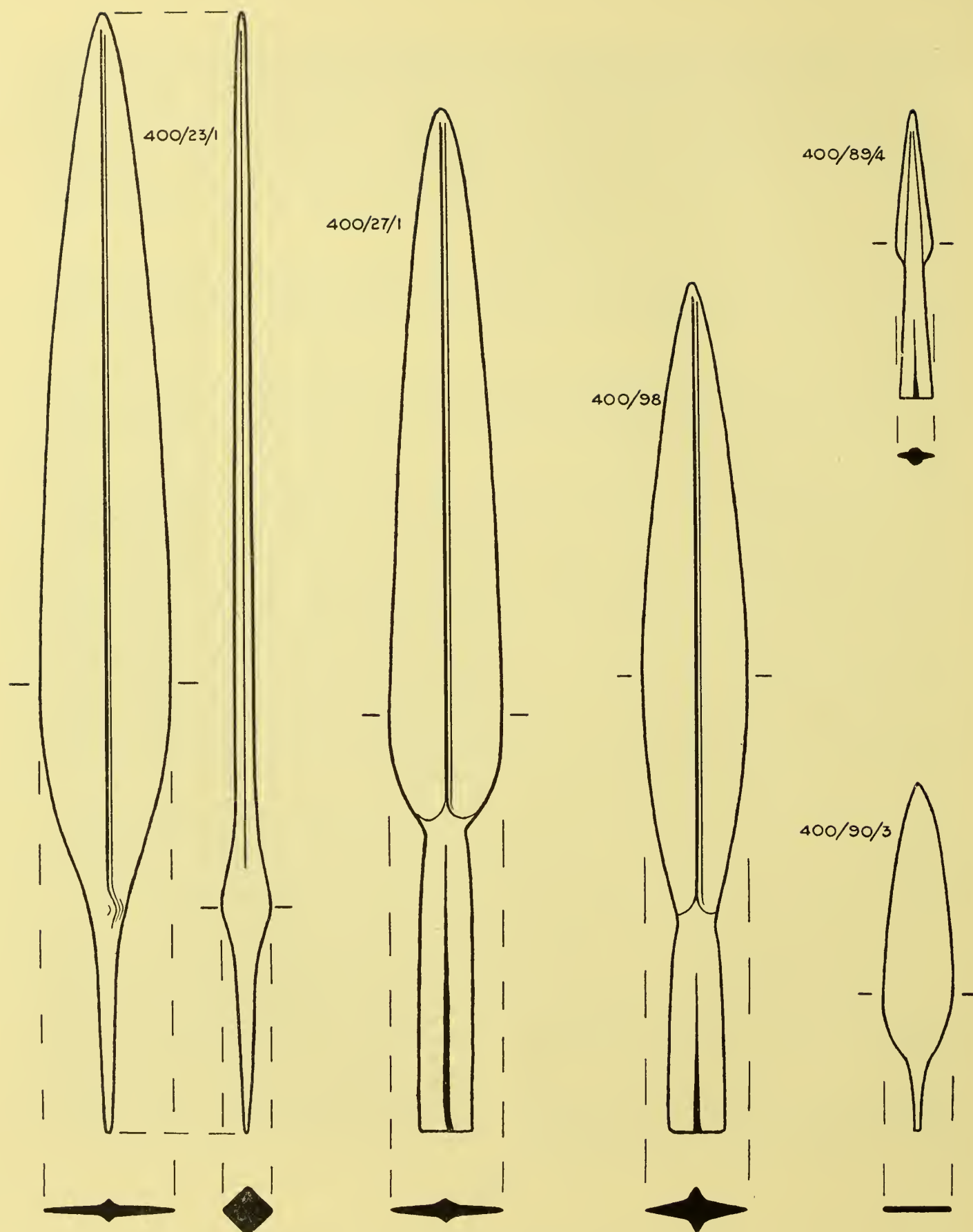


FIG. 7. Iron spear-heads. 1:3

described, in Mr. Arkell's opinion, accurately, as an axe. It is said to have come from the Blue Nile. There is nothing to show how the implements from Abu Geili were hafted, or even if they were hafted at all when placed in the grave. One of them, from grave 400/27, has mat-impressions along most of its length on both sides, and another, from grave 400/98, has mat-markings on one side. Axes of type I were found, usually in a fair state of preservation, but occasionally broken, in the following graves. Details of the position in which they were found are given in the Description of Graves: 400/4, 400/7, 400/9, 400/10, 400/18, 400/21, 400/24, 400/25, 400/26, 400/27, 400/28, 400/87, 400/89, 400/91, 400/95, 400/98.

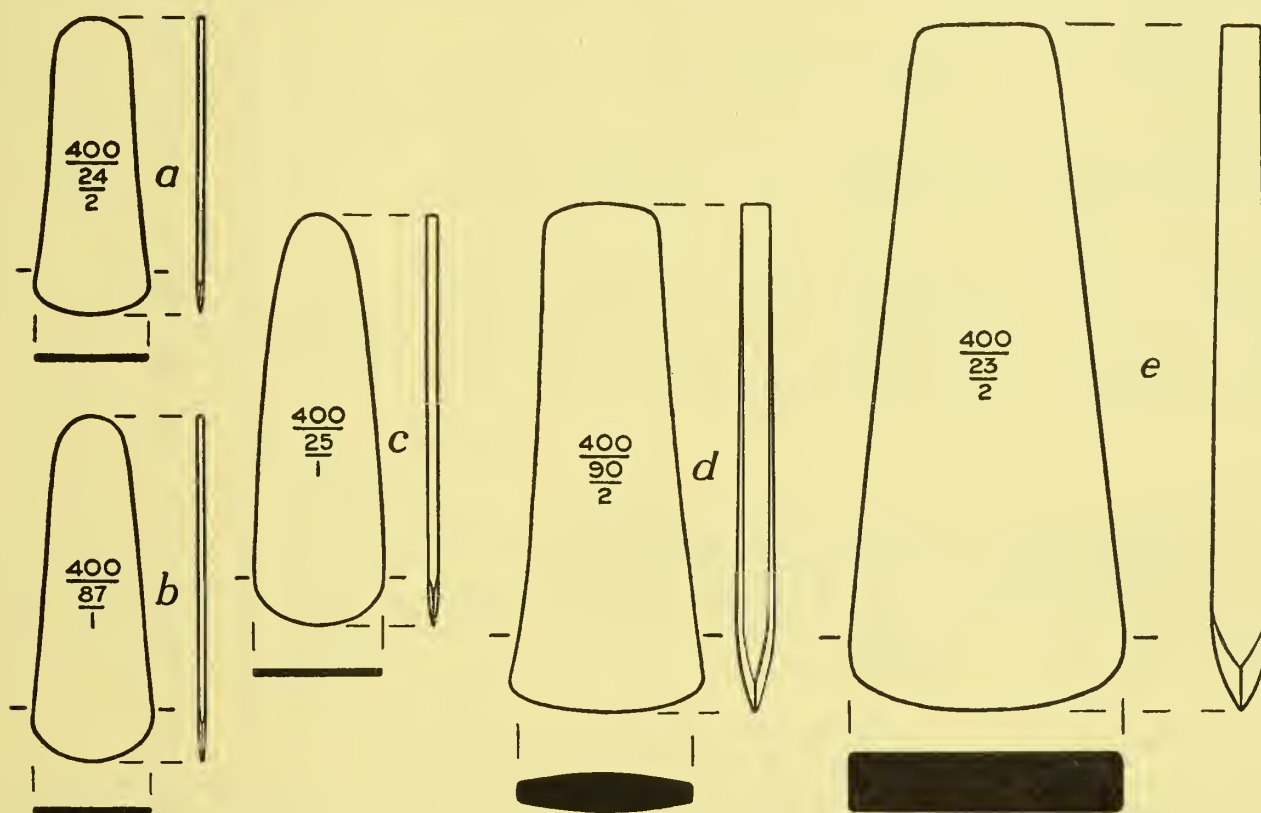


FIG. 8. Iron axe-heads. 1:2

Axes of a larger and heavier kind, type II, are shown in the drawings Fig. 8 *d* and *e*, and in the photographs Pl. XXIV A 1, 2, 3, and 4. The largest of these, that from grave 400/23, was once a formidable tool or weapon, but the object to-day consists of a series of laminae, each of them corroded on both surfaces, and the whole mass held together by rust. The axe from grave 400/71 (Pl. XXIV A 3) is laminated in a similar manner. On the other hand, the implements from graves 400/90 and 400/92 (Pl. XXIV A 1 and 2, also Fig. 8 *d*), presumably forged by a more competent smith, are still solid, though naturally corroded on the surface. No axes of type II other than those mentioned were found. Three fragments, which appeared to be of axes, were recovered during the excavation of squares 2, 3, and 12 (O.C.s 148, 185, 441). None of them has a datable provenance. O.C. 441 has a widely splayed edge.

3. **Rings.** Only two objects of this kind were found in graves. One of them was found *in situ* (see Pl. XV 2 and Pl. XXVI 2) on the right wrist of the body in grave 400/23, and was undoubtedly a bracelet. It is of circular cross-section. The other (Pl. XXIV A 5) was found lying against the left femur of the skeleton in grave 400/84 (see Pl. XIII 2). This is of rectangular section, and while it, too, was probably a bracelet, it was obviously not in position on the arm of the body when it was buried.

4. **Pins.** Under this head are included those pointed objects which do not appear to be designed for any specific purpose and which cannot otherwise be classified. One of them, from grave 400/7, is shown in Pl. XXIV B 8; another was found in grave 400/10. Fragments of "pins" were occasionally found rusted on to other objects. One such was stuck to the axe-head in grave 400/4 and another (see below) was encrusted on to a knife in grave 400/5. The largest nondescript object of this kind, to which the term "pin" is, perhaps, hardly applicable, is that shown in Pl. XXV 4. It is from grave 400/23 and was found in 1947 with the spear-head, when the latter was separated from the bones with which it had been wrapped.

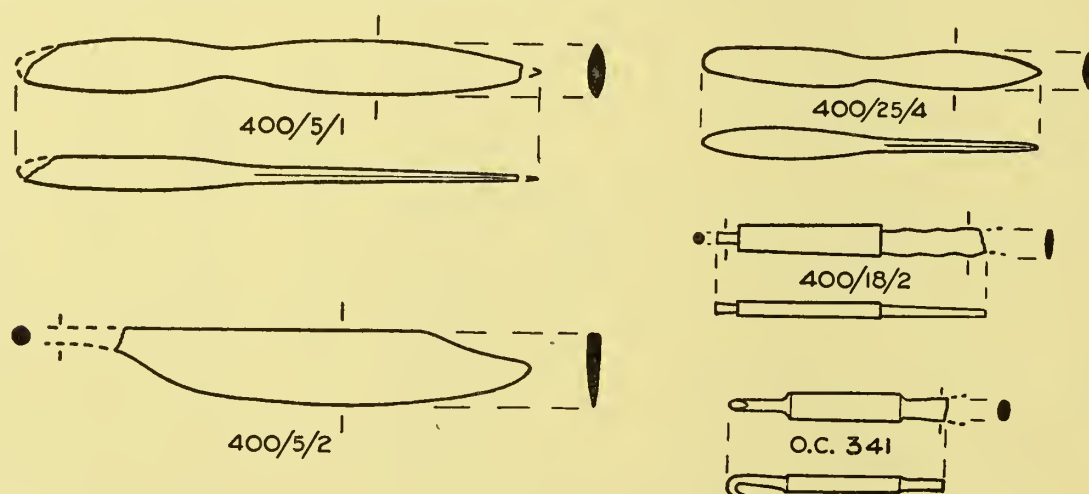


FIG. 9. Iron knives and other objects of iron. 1:2

5. **Knives.** This fifth class, tanged knives, includes a few examples with a double edge. Some of both kinds are certainly (from the position in which they were found in 400/5, for instance) those which were attached to the forearm. Burckhardt (p. 297) illustrates one about 8 in. long, worn in a leathern scabbard on the left elbow. They are, he says, two-edged, like those of the Berabera. He saw them at Shendy. James Bruce (*Travels*, 1805, VI. 89) describes an attempt, at Gondar, to murder Ras Michael with one such knife. The would-be assassin was a "troglodyte" from Gurague. The inhabitants of this region were said to be all robbers; "along the outside of their arm they tie a long, straight, two-edged sharp-pointed knife, the handle reaching into the palm of their hand and about four inches of the blade above the knob of their elbow, so that the whole blade is safe and inoffensive when the arm is extended; but when it is bent, about 4 inches protrudes and is bare beyond the elbow joint". None of these blades from the graves was more than $3\frac{1}{2}$ in. long, and about half of their length was taken up by the tang; and it is difficult to see how they could kill unless they struck the heart. But their purpose, as described by Bruce and

Burckhardt, was recognised by some of the excavators, whose familiarity with the practice entitled their opinion to be taken seriously.

The two knives from grave 400/5, referred to above, were found on the left elbow of the skeleton and are shown *in situ* in Pl. XVI 2. Drawings of them are given in Fig. 9, and they appear also as Nos. 7 and 9 in Pl. XXIV B. Only the blade of 400/5/1 is shown at No. 7 because the handle, broken off, had not been identified when the photograph was taken, though it had been recognised when the drawing was made. The blade 400/5/2, No. 9 in the plate, was found with another iron object (a "pin" or a still smaller knife?) rusted on to it. Part of this object may be seen still adhering to the blade and the remainder, which became detached, is seen at No. 11.

Fragments of knives were found also in the following graves: 400/4, 400/7, 400/9, 400/10, 400/11, 400/21, 400/25 (Fig. 9).

A few iron objects from elsewhere on the site were sufficiently perfect for the type to be recognised. A one-edged knife with a broad, short tang (O.C. 426) was found (probably at about 0.50) in square 12; the back has a slightly concave curve. A stouter one-edged tanged knife (O.C. 412, Pl. LIII B 6) with a convex-curved back was found in square 6, above the Fung surface; it is not unlike some of the knives from the graves. A slender, leaf-shaped blade (O.C. 405) with a long, narrow tang whose end crooks over, was found in square 8 (*i.e.* between the Fung surface and gebel).¹ It, too, has parallels in the graves (*e.g.* the elbow-knife, 400/5/2, which has, however, a much shorter tang and is smaller).

MISCELLANEOUS

Three unclassified objects from graves are the iron staple and ring from grave 400/25 (Pl. XXIV B 10) and two small chisel-like iron implements the purpose of which is obscure. One of these latter, from grave 400/18, is illustrated in Pl. XXIV 12 and drawn in Fig. 9. Another of the same kind was found in grave 400/9. A similar object, O.C. 341, is described in Chapter VI and shown in Fig. 9 and in Pl. LIII B 17.

DESCRIPTION OF PLATES

PLATE XXII

A. Grave 400/100 as excavated.

B. Pottery from grave 400/100. [All to Khartoum]

1. Black-polished, marked with rust through contact with iron. 400/100/3. Type V. 3, Pl. XXVIII.
2. Red ware with traces of red slip; wheel-made, broken and repaired. 400/100/5. Type W. 1, Pl. XXXI.
3. Black-polished, discoloured; part of neck broken away. 400/100/6. Type XI. 9, Pl. XXIX.
4. Black-polished, rather coarse, ware; broken and repaired. 400/100/9. Type V. 2, Pl. XXVIII.
5. Black-polished, marked with rust; crude design, impressed with a "rocker" and originally red-filled, on opposite sides of pot. 400/100/8. Type V. 1, Pl. XXVIII.
6. Black ware with red patches and traces of burnish; impressed "rocked" decoration with remains of red filling; pattern repeats three times. 400/100/7. Type XI. 10, Pl. XXIX.
7. Thick ware, black-polished, marked with rust; broken, not quite complete, and repaired; crude incised design, originally red-filled, on each side. 400/100/4. Type VII. 5, Pl. XXVIII.

¹ I am afraid that the distinction between the numbers 6 and 8 in square AB, 3-4 has little significance. The Fung surface was

not clearly established until afterwards, and some objects from the upper part of 8 may belong to that surface.

PLATE XXIII. Objects from grave 400/100. [All to Khartoum]

1. Beads and pendants of milk quartz. 400/100/11 and 400/100/12.
2. Silver-plated bracelets. 400/100/13.
3. Enlarged view of finial of bracelet.
4. Broken iron "hoe" 400/100/10. The two parts are fitted together in the photograph.
5. End view of hoe with left-hand blade detached.

PLATE XXIV. Iron objects from Fung graves.

A. Axe-heads, type II.

1. From grave 400/90. No. 400/90/2. *See also* Fig. 8 *d*. [Khartoum]
2. From grave 400/92. No. 400/92/3. [Oxford]
3. From grave 400/71. No. 400/71/2. [British Museum]
4. From grave 400/23. No. 400/23/2. *See also* Fig. 8 *e*. [Khartoum]
5. Iron ring (bracelet?) from grave 400/84. No. 400/84/2. [Khartoum]

B. Top row, 1 to 6, axe-heads, type I.

1. From grave 400/87. No. 400/87/1. *See also* Fig. 8 *b*. [Institute of Archaeology]
2. From grave 400/26. No. 400/26/2. [Cambridge]
3. From grave 400/18. No. 400/18/2. [Oxford]
4. From grave 400/25. No. 400/25/1. *See also* Fig. 8 *c*. [Khartoum]
5. From grave 400/95. No. 400/95/3. [Peabody]
6. From grave 400/24. No. 400/24/2. *See also* Fig. 8 *a*. [Khartoum]
7. Knife from grave 400/5. No. 400/5/1. Blade only; *see* Fig. 9 for complete knife. [Khartoum]
8. Awl or "point" from grave 400/7. No. 400/7/4. [Khartoum]
9. Knife from grave 400/5. No. 400/5/2. *See also* Fig. 9. [Khartoum]
10. Ring and staple from grave 400/25. No. 400/25/4. [Khartoum]
11. Point or small knife-blade detached from (9) above. Part of 400/5/2. [Khartoum]
12. Implement from grave 400/18. No. 400/18/2. *See also* Fig. 9. [Oxford]

PLATE XXV. Iron spear-heads from Fung graves. [All to Khartoum]

1. From grave 400/27. No. 400/27/1. *See also* Fig. 7.
2. From grave 400/89. No. 400/89/4. *See also* Fig. 7.
3. From grave 400/90. No. 400/90/3. *See also* Fig. 7.
4. Rod or point of circular section from grave 400/23. No. 400/23/7.
5. From grave 400/23. No. 400/23/1. Shown here with loose flakes of rust detached. *See also* Pl. XXVI 1, and Fig. 7.

PLATE XXVI. Iron spear-heads from Fung graves. [All to Khartoum]

1. Spear-head from grave 400/23 with loose flakes replaced. *Cf.* Pl. XXV 5.
 - 1 *a*. Flake from spear-head with fragment of woven fibre mat.
2. Iron bracelet from right wrist of body in grave 400/23. No. 400/23/3.
3. Spear-head reconstructed from fragments in grave 400/98. *See also* Fig. 7.

CHAPTER IV

THE POTTERY (1)

By O. G. S. CRAWFORD

THE following remarks of a general kind are intended merely to supplement the fuller description of Mr. Addison.

The excavations at Jebel Moya were the first ever undertaken in the Southern Sudan. There were, therefore, when the excavations at Abu Geili were begun, no standard types of pottery or anything else which could be used as a means of dating. The only hope was that it might be possible to date by means of imported objects of known date. Such objects had been found at Jebel Moya, but in the absence of any published account it was difficult to assess their value. I hoped that it might be possible to construct a sequence of pottery types from the village site; and I still hoped it might be possible to do so, in spite of the admitted imperfections of the season's work, when the objects were at last unpacked and examined after their long repose. Unfortunately these hopes have not been fulfilled. Mr. Addison has studied the pottery closely and objectively with the great advantage of a very intimate knowledge of the Jebel Moya finds and he can find no difference between the types of pottery from the upper floors of the village site and those from the lower ones. My own, much more desultory, work on the same lines confirms his observations. For instance, the most striking type of pottery is the black-burnished ware ornamented with incised, red-filled designs. Remains of a pot of this type (O.C. 254) were found on F. 1, the uppermost of five floors in Room 37, having a total thickness of 1.98 metres. But a similar sherd (O.C. 20), one of many such, was found by myself and recorded as from one of the earliest levels. I cannot believe that there was not some change in type during the village-period, but if there were such we cannot detect it. The explanation may be that the changes were slight and were of *forms* only, not of texture or design; and that it will need a large number of whole pots to reveal them, potsherds alone being inadequate.

In spite of these disabilities, it is possible to state certain conclusions:

1. The pots found in the pits, below the houses, are the earliest and may be put in a class by themselves and dated, approximately and with some hesitation, to the last centuries before the Christian era.
2. All the pottery from the floors, or between the floors, of the village itself forms a class by itself, belonging to the first centuries of the Christian era, the limiting dates being uncertain.
3. The pottery and other objects from the Meroitic grave (400/100) must, if the dating of the glass vessel (O.C. 599) is correct, be dated after about A.D. 200.
4. The graveyard pottery forms a fourth class, certainly medieval or later and probably of the sixteenth or seventeenth centuries.

These conclusions, though better than nothing, do not help very much. The number of objects in classes 1 and 3 above is small. There is no fixed *terminus a quo* at one end or *terminus ad quem* at the other. The first three groups represent a consecutive series, even allowing for the possibility

of an interval of time between 1 and 2. The only real contrast is between 1, 2, and 3 on the one hand and 4 on the other, 4 being certainly separated from the three others by nearly a millennium. But the four classes are based, not upon vague *a priori* typology, but upon stratification. They rest upon evidence derived solely from the site itself, and although future excavations will, no doubt, modify them, they are unlikely to prove them to be wholly wrong.

At the time of the Abu Geili excavations, Meroë, 240 miles to the north, had been dug and a preliminary report published in 1911. On returning to England in the summer of 1914, one of my first acts was to go and see the exhibition of objects found there and at other sites farther north, in the hope of obtaining some clue to the dates of the chief kinds of Meroitic pottery and other objects found. I saw plenty of nice things, but, to my surprise and disappointment, got no help in the solution of my own problem, which I could see would have to be solved, if at all, independently. I had hoped, of course, that I should be able to attempt this by further excavations in the following season, but this was not to be. But my decision to ignore the work done at Meroë was sound. To this day, nothing but the preliminary report has been published, although the excavators were not inhibited by contract, as I was. That report itself is bad, even as a preliminary report, and has been severely criticised.¹ On the basis of a study of the objects from the cemetery at Meroë, preserved at Oxford, Liverpool, and Brussels, Professor Monneret de Villard concluded that "the chronology of this cemetery was exactly the opposite of what Garstang thought". The oldest part is represented by the graves of the north group (Nos. 500–599), the only ones containing the biscuit-ware with typical Meroitic decoration. Next in order of age come the graves under the railway (Nos. 400–599) with "red ware of Roman type", as Garstang says, probably meaning that he regarded it as an imitation of *terra sigillata*. Later still are the two groups of graves in the south (Nos. 1–99) and centre (Nos. 300–399) of the cemetery, which Monneret regards as belonging to an intrusive culture with affinities in Kordofan, of post-Meroitic date and belonging to the Nuba or Noba.² Although this reconstruction of the evidence inspires more confidence than does the aforesaid report, it should be noted that it, too, is based on typology and not on stratification. It will therefore be more prudent not to attempt to draw any chronological conclusion from Meroitic parallels.

There is one more observation to make before proceeding to describe examples of the different pots found. In the pottery of Period I, that is, in that of the first three classes enumerated above, we may observe two distinct kinds. There is what one might call a "native" tradition, represented by pots, mostly round-bottomed, of black or brown ware, highly burnished and often ornamented with incised patterns filled with red (and occasionally, e.g. O.C. 455, with yellow) powder; others are wheel-turned pots, usually of red ware, sometimes with conoid or flat bases; the red colouring matter is sometimes applied as a wash. The second group includes fragments of finely made Meroitic ware, which were probably imported from the north. There is no reason to regard the "native" pots as anything but the normal ones made and used in the Blue Nile Valley at this date. Their affinities with other types will, no doubt, be discovered one day, when the scientific excavation of El Ais or some other stratified site on the White Nile has provided a secure sequence of types.

The only pots which can definitely be assigned to class 1 are O.C.s 741, 742, and 800, the two

¹ "La descrizione del cimitero è fatta in modo grossolano, disordinato e incompleto." Monneret de Villard, *Storia della Nubia*

Cristiana, 1938, p. 38.

² *Op. cit.*, pp. 38–39.

former of which were found in the pit in R. 26 and the last in the pit in R. 54. Class 2 comprises nearly all of the pots which are shown on the type sheets Pls. XXVII–XXXI, the exceptions being most of types V and VI, some of type VII, and all of types XI and XV. Class 3, strictly speaking, includes only the pottery from grave 400/100, but on grounds of similarity it is probably safe to assign to this class most of types V, VI, and XI.

Before dealing with these pots and their typology in detail, a word must be said about the big pots 700, 702, 703, and 781 (*see* Fig. 5, p. 13). When found, they were magnificent specimens of burnished ware, hand-made and not wheel-turned. Their dimensions were all about the same and their outlines were almost identical, except that the rim of 700 was markedly, those of 702 and 703 slightly, everted. Although it would be dangerous to draw conclusions from such plain types, it is a fact that O.C.s 700 and 702 stood on the upper floors of their rooms at about the same level (52 metres). These big burnished pots enable us to connect the village site with the area outside it on the north, whose stratification has already been discussed. I mentioned in passing (p. 15) certain big pots (O.C. 649, 650) which were there found covered by at least 2.35 metres of deposit, 0.60 metre of which was above the Fung surface (*see* Pl. XXI). The pots stood on, or at the most, only a few centimetres above, “gebel” and were, when found, certainly still in their original positions. Now the outline and dimensions of 649 were almost identical with those of 781, which stood on the lowest floor of Room 19, which was 0.49 metre above “gebel”. If we assume a date of A.D. 1550 for the Fung surface (and therefore of the graves dug from it) we get a rate of deposit of 0.00165 metre per year for the accumulation of 0.60 metre which overlies it here. Assuming a constant rate, we get a date of A.D. 490 for the surface on which pots 649 and 650 stand. If we assume a date of 1500 for the Fung surface, we get for the other a date of A.D. 293. Both dates are, I think, too late for the lowest levels of the village site, but it is remarkable that the date reached on the assumption of 1550 for the Fung surface and graveyard (which I regard as much more likely than 1500) should be consistent with the date (c. 600) suggested as possible for the latest occupation of the site.

It is safer, however, to regard the figures adopted, both for the rate of deposition and for the date of the Fung surface, as merely approximations. Thus regarded, they do show that our system of dates, as a whole, cannot be far out. When thus tested by stratification, the evidence upon which the dates of both the village and cemetery were based is at any rate not upset.

Class 4

The pottery of class 4 is radically different from that of the other three classes. Before its discovery in the graveyard here it was completely unknown.¹

The typical graveyard pot is a flat-based bowl of black, incised ware; and I still remember the thrill of excitement when the first example of this type was unearthed. To one whose only previous experience had been in the field of British archaeology, where every excavated sherd is treasured and where whole pots were always rare and seldom beautiful, these splendid bowls would have been refreshing, even if they had not been new. The type is somewhat unusual for

¹ The first pot of this type (400/1/1) was found on 2nd Feb. 1914. Since then other examples have been found, but without datable associations, at Sennar (*Sudan Notes and Records*, vol. XVII,

p. 103; vol. XVIII, p. 292) and Begawi (*ibid.*, vol. XIII, p. 263, Pl. 4).

pottery, and one wonders whether they may not have been imitated from the once famous Sennar baskets.¹

With these ornamented flat-bottomed bowls were found, in five of the graves, round-bottomed pots, plainly ancestral in shape to the modern *burma*. Four of them (in graves 400/7, 24, 86, 97) were unornamented, but the fifth had decoration of the geometric kind rather like that of the bowls. Several large fragments of *burmas* were found on the site, in square 3, associated with two large pieces of a flat-bottomed pot of graveyard type (O.C. 219, 220) lying on the surface which, partly on the evidence of the latter, I have called the Fung (or graveyard) surface. The *burma* fragments were O.C.s 215, 217, and 221, the last two being illustrated in Pls. XXVIII and XLVI B.

Any sequence that can be dated is valuable in archaeology, and it seems that we have here a sequence in the development of the *burma* covering about four centuries. An intermediate stage is shown by a drawing, made at Sennar in 1821, by Linant de Bellefonds,² showing a woman carrying a pot on her head. The pot is round-bottomed, but has rather a longer collar than modern *burmas* and perhaps the mouth may be rather less wide; but, of course, one cannot trust too much to so small a drawing.

Many fragments of *burmas* were found at Dar el Mek (see p. 164), but it was not possible to reconstruct any of the vessels with certainty.

THE POTTERY (2)

By F. ADDISON

The pottery found during the excavation at Abu Geili consisted of a mass of potsherds with a relatively small number of complete—but not necessarily whole—pots. Some of the latter were found in graves and others were found *in situ* on the floors of rooms, but all of them were registered on object cards. The best of them were repaired or reconstructed soon after they were brought to England, but the fragments of the remainder were left for more than thirty years in the baskets in which they had originally been packed. Also registered on object cards were a number of individual sherds found during the excavation of the area where no walls occurred, but the bulk of the sherds were collected during the clearing of the rooms and floors. These, with other small objects, were packed in baskets adequately labelled with the number of the room and floor on which they were found, but not otherwise registered. All these fragments were clearly the remains of the ordinary household pottery in use during the occupation of the site.

The total volume of potsherds brought, at Mr. Wellcome's insistence, to England was considerable, and at the outset it presented the same problem of sorting and discarding which had already been encountered in connection with the Jebel Moya pottery. Most of it was hand-made and locally made; some, which may or may not have been imported, was wheel-made, and there were in addition a few sherds of painted or stamped Meroitic ware, an occasional fragment of green-glazed medieval Arab pottery, and even two fragments of Chinese celadon.

The flat open bowls from the cemetery to the north of the village are sharply differentiated

¹ For these, see my *History of the Fung Kingdom of Sennar*, now (1950) in the press.

² To be reproduced in my *ibid.* The original is in the Griffith Institute, Oxford.

from the rest of the pottery and form a clearly defined group which it is appropriate to consider by itself. It will be convenient to deal first with the various types of pottery from the village site.

POTTERY FROM THE VILLAGE SITE

The pottery from the village site is mainly of Period I and embraces classes 1, 2, and 3.

Before embarking on a description of this pottery it may be observed that a fairly exhaustive analysis of the sherds, as well as other objects, from the various rooms and floors had an unexpectedly negative outcome. All the local types of pottery which could be distinguished appeared to be scattered indiscriminately over the entire area and at every level. A given type might occur on all the floors of a room, or it might appear on the top floor in some rooms, on the bottom floor in others, and on the middle floors in yet others. Moreover, no type ever appeared in isolation; the contents of the floors were always mixed, though every type did not occur on every floor. There was, then, no distinguishable "series" of pottery nor any evidence of chronological or typological development.

Such pottery forms as could be recovered are shown in the type drawings in Pls. XXVII–XXXIII. A few of these drawings are of whole pots, but most of them are based on fragments large enough to enable the form and diameter of the original pots to be determined without serious error. The complete pots, and those which could be reconstructed, are illustrated by photographs in Pls. XLII–XLVI. On the type-sheets the various types of hand-made pots are denoted by roman and arabic numerals, the wheel-made vessels by the letter W, and the funerary bowls from the late graves by the letter G. A few pottery forms were common both to Abu Geili and Jebel Moya, and, indeed, persist to this day; but on the whole the Abu Geili pottery is different, both in form and decoration, from that found at Jebel Moya, and it therefore seemed desirable to adopt different classification symbols from those used in the Jebel Moya publication. For reasons already given no pottery sequence could be detected and the classification is purely *ad hoc*.

HAND-MADE DOMESTIC POTTERY

By far the most common type of pottery found at Abu Geili is a black-polished ware with impressed decoration filled with red pigment. Fragments of this occurred in 96 out of the 99 rooms from which pottery survived,¹ and on 170 out of 209 floors, *i.e.* on 81 per cent. of the floors. In about three-quarters of the rooms this kind of pottery was found on every floor from which potsherds have been preserved, and although a number of rooms had only one or two such floors, several had as many as five. Clearly this ware had the widest possible distribution and the less common fabrics were inevitably found in association with it. Sometimes, but more rarely, the designs on this black-polished pottery were filled with a yellow or a white pigment. Yellow-filled fragments were found on only 11 floors (5 per cent.), each in a different room, while white-filled fragments occurred in 39 rooms and on 48 floors (23 per cent.). White-filled designs, however, were less often found on black-polished pottery than on a light brown ware to be described later.

Not all the black-polished pots were decorated. A few quite plain whole ones have survived

¹ The potsherds from a few rooms and floors were lost through damage during war-time storage. They formed but a small proportion of the whole and their loss is not a matter of consequence.

A similar fate befell the fragments of a number of pots found *in situ* and registered on object cards.

and others must at one time have existed. It is, however, difficult to estimate the ratio of plain to decorated vessels; for, while considerable quantities of small, black-polished sherds were found, it is impossible to say whether these were plain fragments of decorated pots or simply fragments of plain pots. The impression gained by repeated handling and sorting of the mass of potsherds is that plain pots were much less common than decorated ones.

Another distinctive type of pottery is a light brown burnished ware, hard and well fired, which was widely distributed, though its total bulk was not large. This ware either had a specialised use or it was the product of a particular race of potters. It seems to have been used for the making of very large pots, for fairly large deep bowls (type VIII. 1, VIII. 2), and for large, shallow dishes (type I. 1 to I. 5). These latter were decorated on the inner, concave, surface and sometimes on the outer surface as well. No complete example of any of these forms has survived, nor has it been possible to recover the shape of the large pots. Their fragments, however, vary in thickness from 10 to 15 mm., and some are illustrated in Pl. XXXV B. The designs on this light brown ware were not always filled with colour, but both red and white pigments were frequently used. A white filling was employed more often than was the case with the black-polished pottery.

The two kinds of ware just described—the black-polished and the light brown burnished—may be regarded as the standard types of Abu Geili hand-made domestic pottery. There were, of course, sherds of other colours, plain red and dark brown and indeterminate shades like grey and buff, but it is possible that these were more the result of accident than of deliberate design. In any case, they formed only a small proportion of the total mass.

Yet another element in this mass, unmistakable whenever it was encountered, was Jebel Moya pottery, mostly of the familiar red-polished ware with characteristic “dry-scratched” decoration (Pl. XXXVIII A). It has already been observed that a complete pot (Pl. XLIV 11) of this ware was found in the pit under the floor of Room 26. There were also a few fragments of black-polished ware with incised ornament (Pl. XXXVIII B); and single sherds of painted pottery—thick ware with a lattice of red lines on a black ground—were found in Room 5, Floor 4, and Room 112, Floor 2. In addition there were a few lug handles, doubtless from red-polished pots (Pl. XXXIX A 2, 3).

The presence of Jebel Moya pottery at Abu Geili is a matter of interest and its distribution amongst the various rooms and floors was therefore investigated in detail, with results much the same as that indicated on p. 43 above. The total amount of this pottery was not large, but it was found—represented at times by only a single sherd, and usually mixed with other wares—in 41 rooms and on 59 floors. The rooms were dispersed over all the area within the walls; the number of floors on which the Jebel Moya pottery was found varied from room to room and the floors exhibited the widest possible variation in level. In 30 rooms the pottery occurred on only 1 floor, which might be the highest in the room, or the lowest, or any intermediate floor; in the remaining rooms it was found on 2, 3, or 4 floors. In short, the investigation showed that fragments of the Jebel Moya pottery occurred, somewhere or other, at every level. It showed also, however, that it was found rather more often on lower floors than on upper ones and on the lowest rather than on the highest.

It has been observed more than once in the preceding pages that this Jebel Moya pottery was found on the earliest habitation levels at Abu Geili. This in itself is not surprising, for evidence has already been adduced to show that the first settlers probably appeared on the site during the

last centuries B.C., and it was during this period—according to the present writer's dating—that the Jebel Moya settlement was abandoned. It would, therefore, not be unreasonable to suppose that, in those early days, a few people may have moved from Jebel Moya to Abu Geili bringing their pottery with them. The Jebel Moya pottery, however, as has been shown above, was not confined only to the earliest levels at Abu Geili; it was obviously in use there (as shown by the dating of other objects on the village site) from the foundation of the settlement at least to the end of the third century A.D. and probably later, *i.e.* long after the Jebel Moya settlement was supposedly deserted. It seemed, then, impossible that all the red-polished dry-scratched ware found at Abu Geili could have come from Jebel Moya, nor, from its appearance, did it seem probable that the pottery could have been made at Abu Geili itself. Here, clearly, was a situation in which impartial scientific opinion should be sought. Accordingly four potsherds, marked respectively A, B, C, and D, were submitted to Mr. A. B. Searle with the request that he should, if possible, determine whether or not they were made on the same site. He reported as follows:

"Samples A and C are made of an alluvial clay with no marked characteristics.

"Sample B is made of an alluvial clay with numerous small fragments of quartzite and a few particles of mica. This is definitely a different material from that used for samples A and C.

"Sample D is made of a more ferruginous material than the other samples. It is also more sandy and is different from that used for samples A, B, and C.

"It is possible that these materials all occurred on the same site but it is more probable that the samples are from three different sites.

"The surface appears to have been made by polishing with the aid of a slip or cream made of washed clay, of a different composition from any of the samples but possibly obtainable from them by treatment with water and fractional settlement so as to separate the coarser (undesired) particles."

Now sample A was a red-polished sherd from Jebel Moya itself selected at random from a box; sample B was a fragment from a sherd of Jebel Moya ware (from the collection O.C. 21) found by Mr. Crawford on one of the earliest habitation levels at Abu Geili. Sample C was a sherd of Jebel Moya ware from one of the floors on the village site at Abu Geili, and sample D was a plain fragment broken from one of the characteristic black-polished red-filled sherds from Abu Geili.

The analysis of four potsherds out of many thousands is not, perhaps, a secure foundation upon which to base reliable conclusions; for this purpose the analysis of a fairly large number would have been desirable. It is, indeed, a curious chance that the sherd from Jebel Moya (sample A) should not have contained any grains of quartzite and mica such as were found in sample B, for grains of this kind were characteristic of much of the pottery found on the Jebel Moya site. It was, in fact, the presence of precisely these grains in such sherds as sample B which led Dr. Reisner—and Mr. Crawford himself for that matter—to assume that they must have come from Jebel Moya. Taken as they stand, the results given above confirm that neither of the sherds of Jebel Moya ware found at Abu Geili was made there. The analyses also show, contrary to what might have been expected, that, while the (presumably) later of these sherds could quite possibly have come from Jebel Moya, the earlier one probably did not.

Now the type of pottery under discussion is only one of several distinctive wares found at Jebel Moya and, in the report on that site, the present writer expressed the view that none of these originated at Jebel Moya itself. They were to be regarded as examples of the kind of pottery made

by different tribes within the influence of Jebel Moya, members of which, voluntarily or otherwise, went to live in that settlement. Much of the pottery found at Jebel Moya was doubtless made there, but some must have been brought in from outside. On this hypothesis the homeland of the people who made the red-polished dry-scratched ware was outside Jebel Moya, and these people would continue to make their distinctive pottery after the Jebel Moya settlement had been abandoned. Different groups of them, moreover, would make pottery of the same external appearance (for this was a matter of red paste and decoration), but of an internal composition depending on the local materials available. Hence the presence of yellow grains in some samples of this pottery and their absence in others.

This hypothesis, *i.e.* the hypothesis that there existed sources of "Jebel Moya" were independent alike of Jebel Moya and of Abu Geili, would appear to be supported by the results of Mr. Searle's analysis. The result, as far as Abu Geili is concerned, is that no contemporary connection between that site and Jebel Moya can be conclusively demonstrated. It is certainly true that nothing was found at Jebel Moya to suggest any connection with Abu Geili.

To return to the local Abu Geili pottery, a selection of decorated sherds is illustrated in Pls. XXXIV-XXXVII and XXXIX. The designs are all of them impressed, not incised, and most of them show traces of having been filled with coloured pigment—usually, as has already been noted, red. In a few cases no trace of pigment can now be discerned in the impressions and it is possible that these were left unfilled. The majority of the sherds are of black-polished ware, but some, in particular Nos. 5, 6, 7, 8 in Pl. XXXV B, and Nos. 3 and 5 in Pl. XXXIX B, are of the light red-brown pottery referred to above. The colour of the ware and of the pigment used in decoration is given for each sherd in the Description of Plates at the end of the chapter, but attention may here be called to the fragment No. 6, Pl. XXXIV A, in which one-half of each element in what is left of the decoration is filled with white pigment and the other half with red. No. 7, Pl. XXXV A, is an example of a yellow-filled design.

Although a good deal of the coloured filling has now disappeared from the patterns on the pottery, there is some evidence to show that originally it may have been applied fairly thickly. On the sherd No. 10, Pl. XXXV A, the two smooth bands show a brilliant black polish and the space between them, roughened by means of a "rocker", is so filled with red pigment that impressions made by the tool are not visible in the photograph. It is possible that this was the usual practice and that the indentations made by the implement used to impress the design were intended not—or not only—to be ornamental in themselves but to serve as a key to hold the pigment in place. If this were the case, however, the pigment must originally have contained some binding agent or have been protected by some sort of surface varnish. To-day the colour rubs off very easily and it would hardly have been applied with such liberality to pots intended for regular domestic use if it were liable to rub off every time the pot was handled.

At least three, and possibly four, types of implement must have been used in decorating the Abu Geili pottery. One of these, though no examples were found, was almost certainly the usual type of notched "rocker" of bone or wood, which has a long history and wide distribution, and which still remains in use in the Sudan. Another type, which *has* survived, is a variant of the ordinary rocker but made of red pottery. A number of these pottery tools were recovered during the excavation, and examples are shown in the drawings in Pl. XLI. Some of them are double-ended and others single-ended, and they were evidently made in a fairly wide range of sizes and with

a certain variety in their working-edges. The impressions made by these implements can readily be distinguished, even in the photographs, from those made by the more usual tool. All the designs shown in Pl. XXXVI A, for instance, were produced by pottery tools and so also were those on many of the sherds illustrated on the other plates. On the other hand, a pattern such as that on the fragment No. 6, Pl. XXXV B, can only have been made with a rocker of the more familiar kind.

The third tool which may possibly have been used for pottery decoration is the notched roller; patterns such as Nos. 3 and 5, Pl. XXXV B, certainly have all the appearance of having been rouletted. Caution, however, is advisable here. It is quite easy to see that a pattern such as that on the fragment No. 6, Pl. XXXV B, has been formed by twisting an ordinary notched rocker about one end after each impression without lifting it from the pot. In a process of this kind, if the angle of twist is reduced between each stroke, a point is reached when it becomes so small that successive impressions made by the tool are very nearly parallel, and the effect produced is that shown on the fragment No. 7 in the same photograph. Close scrutiny reveals that the pattern here has been made by manipulating an ordinary notched rocker in the manner just described. This at first glance is so like a rouletted impression as to raise doubts as to whether such patterns as those on Nos. 3 and 5 really were made with a roller. The roller, then, since none was found, must be postulated as a possibility rather than a certainty.

A fourth technique of decoration, which must have had its appropriate tool, is that displayed on the pottery fragments in Pl. XXXVI B. The feature common to all these designs is the wavy or zigzag band of false relief formed by the impressions of a flat-ended tool of rectangular or triangular section. This type of ornament must have been quite easy to produce and yet is strikingly effective. Usually it was applied in bands to the sides of pots, but sometimes it was used on the flat rims of open bowls, see, *e.g.*, O.C. 43, Pl. XLII. The sunken or impressed part of the design appears as a general rule to have been filled with pigment so that, in its pristine freshness, the wavy band stood out, polished and glistening, against a background of red or yellow. In the fragment No. 5, Pl. XXXVI B, the concentric bands are alternately red and yellow. This fragment, it may be added, is part of a disk of black pottery, the original purpose of which is uncertain. The most remarkable piece of pottery decorated in this technique is that shown in the drawing Fig. 10. It is O.C. 186 (now in Khartoum) and was found in square 1. It is of hard, pale buff ware which bears no trace of any kind of coloured filling, and on the base is a delicate impressed design. The fragment is part of what seems to have been a boat-shaped vessel, rectangular in plan, the original dimensions of which were approximately 14 cm. long, 7.5 cm. wide, and 6.5 cm. deep. Possibly it was a cover of some kind. Clearly it would not stand with the curved base downward unless it had special supports; but mouth downwards it would at all events be stable and the design on the "base" would be in full view.

Yet another implement which ought to be referred to here is the stamp made of baked pottery. A few such stamps were found on the site, and drawings of some of them are shown in Pl. XLI. Its use, however, seems principally to have been confined to spindle-whorls (*see* Chap. VI). A few fragments of locally-made stamped pottery are shown in Pl. XL B, 1, 2, 3, and 5, but this was not common and was probably an imitation of imported stamped Meroitic pottery.

The designs themselves on the pottery do not display a wide variety of types. Fragmentary as they are, it can be seen that most of them are variants or elaborations of the same basic element

which, in its simplest form, is somewhat as shown in Fig. 11. It was not in ancient times confined to Abu Geili itself, though it appears to have been peculiar to that part of the country. It is difficult to see on what it is based, but manifestly it is a conventional representation of something which, to the makers of the pots, had a special significance. It is to be noted that if this pattern is repeated round the sides of a globular pot the effect is to produce a lotus pattern rising from the base of the pot, as may be seen in Pl. XXXIV B. In these small pots, however, it may well be that the lotus pattern is one consciously aimed at; this certainly would appear to be the case with the fragment No. 6 in the photograph.

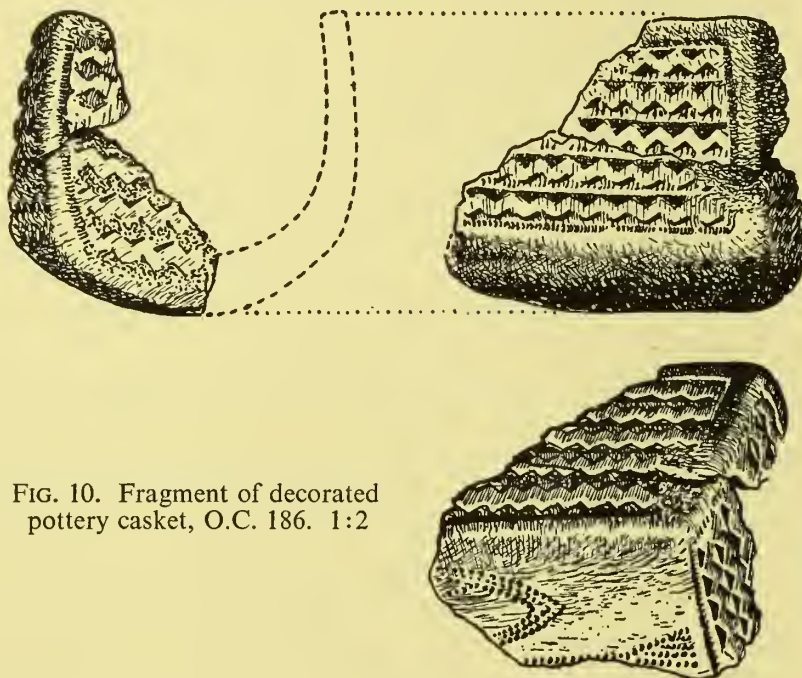


FIG. 10. Fragment of decorated pottery casket, O.C. 186. 1:2

Another design which often recurs is the “butterfly” pattern which may be seen on the fragment No. 5, Pl. XXXVII A, or on the bowl, type V. 1, in Pl. XXVIII. Besides these conventionalised patterns there are occasional more naturalistic designs such as the crocodile (Pl. XXVII, type III. 12; Pl. XXXVII A 3), the ostrich (Pl. XXXVII A 10; Pl. XXIX, type XI. 8), and the scorpion (Pl. XXXVII A 1).

The various forms of hand-made pots are shown in Pls. XXVII–XXIX and the very large pots in Pl. XXX. Details of colour and ware are given in the Description of Plates and little comment is necessary here. Of most of the types it is difficult to say how common they were, since all the pottery was so badly broken up, but one type which could easily be picked out in any context was type IV. Fragments of carinated bowls were found in 65 rooms and on 90 floors, ranging from the lowest to the highest; they were, that is, widely distributed without any recognisable stratification. This wide distribution, however, gives the shallow, carinated bowl a claim to be the most characteristic Abu Geili type.

Types V and VI are unusual forms not known from other sites. The former occurs in bronze in the Romano-Nubian cemetery at Karanog,¹ but at Abu Geili it seems to be confined almost

¹ Karanog. *The Romano-Nubian Cemetery*, by D. Randall MacIver and C. L. Woolley, Pl. 40.

exclusively to grave 400/100, though it is always possible that fragments of similar bowls in the rooms may have passed unrecognised. This type belongs, by definition, to Mr. Crawford's class 3 and it is probable that type VI is of much the same date. Type VI. 1 is the handsome vessel, unfortunately incomplete, shown in the photograph, Pl. XLII. It was found 1.85 metres below ground surface, 5.35 metres east of line 3 on the lowest floor of a house exposed in the cliff face.

The fragments upon which types VII. 8 and VII. 13 are based are illustrated in Pl. XLVI B. Of coarse, well-fired red ware they are obviously quite different from the usual Abu Geili pottery and more akin to that found at Dar el Mek. They were found in square 3 at a level corresponding with the Fung surface and obviously belong to a late period, *i.e.* to class 4 (*see* section, Pl. XXI). The body of each of these pots was covered by a coarse mat-marking similar to that seen on pottery of very late Meroitic or post-Meroitic date.

Types VIII. 1 and 2 are large open bowls of light red-brown ware which have already been referred to; type VIII. 4 (O.C. 742) is the reconstructed pot of Jebel Moya ware mentioned on p. 44. It is probable that types VIII. 5 and 6 are also to be associated with the Jebel Moya pottery.

Type X is very fragmentary, but as much of it as can be seen resembles the types R. 2 and R. 3 which were discussed at some length in the Jebel Moya publication. Yet other fragments which have associations with Jebel Moya are the small feeding cups and ladle types XIV.

1 to 3. No other fragments other than those shown in the drawing were found at Abu Geili.

The vessels of type XV have a strangely alien appearance amidst the general mass of Abu Geili pottery. Only fragments were found and it has been possible to recover the complete form in only one case (type XV. 1, O.C. 657). The objects obviously varied considerably in size and shape, but the feature common to all is the thick, perforated base. The perforation was carried out in many different ways. Some bases, *e.g.* XV. 1, XV. 7, XV. 9, have a single vertical hole through the middle; XV. 5 has two horizontal holes intersecting at right angles; XV. 10 has three holes at 120° meeting in the centre; XV. 3 has four holes passing obliquely downwards from the sides of the base, and XV. 8 has four unfinished holes. The presence of the holes suggests some connection with fire, and it may be conjectured that the vessels were braziers or that they may possibly have been used by women for fumigation. The ware is different from anything else found at Abu Geili and is more like that from Dar el Mek; fragments of similar "braziers" were, indeed, found on that site. Apart from this the ware itself gives the impression of being late, and it can with some confidence be assigned to the Fung period, *i.e.* to class 4. Yet, though the ware may be late, the actual type of vessel is not. An object very similar to type XV. 1 was found in the Meroitic cemetery at Faras¹ in a grave dated to the period first century B.C. to first century A.D. More interesting, but less useful, is the fact that the writer has seen the base of a small vessel from an Iron Age site in England² perforated in much the same way as those under discussion.³

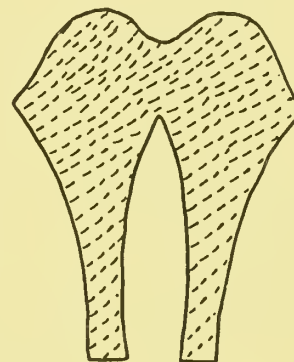


FIG. 11. Basic element in pottery decoration

¹ *Annals of Archaeology and Anthropology, Liverpool*, vol. XI, Pl. XXXI, type lxxxvi b; also Pl. XL 12.

² In the London University Institute of Archaeology; it comes from Maiden Castle.

³ Since this went to press there has appeared in *Antiquity*, No. 92, December 1949, p. 215, a note by J. F. S. Stone comparing objects of this type from Victoria Nyanza with similar ones from the Channel Islands described by Mrs. J. Hawkes.

Some of the very large pots of which type-drawings are given in Pl. XXX are also shown in the photographs, Pl. XLV. These are types XVI. 1, 2, and 3 of burnished red ware and type XVII. 1 of coarse, discoloured, red ware. As mentioned elsewhere they were found *in situ* in the rooms (see Pls. XI and XII), and some of them have since been reconstructed. The remains of quite a number of other large pots were found on some of the floors, but they were too badly shattered to be worth the trouble of reconstruction. The fragments were of very thick, coarse ware, rather soft and not particularly well fired, and to all appearance more than usually devoid of interest. As far as could be judged they were roughly made vessels of type XVII and were probably grain bins. The base of one of these is shown *in situ* in Pl. XI.

The large vessels of type XVI may have been used for storing water, though they are a good deal larger than anything used to-day for this purpose. They are of better quality than the bins and probably of thinner ware, but the thickness could not be ascertained because of the layer of cement and plaster left on the inside after the reconstruction of the pots.

The rims, types XVI. 4 and XVI. 5, are of the light red-brown burnished ware which has already more than once been referred to. All that remains of XVI. 4 are three rim fragments, two of them fitting and drilled for lacing in antiquity. To judge from these fragments the original pot must have been even larger than O.C. 700. The ware is exceptionally well fired and only the middle third of the fracture is black.

From time to time during the excavations, on the floors of rooms as well as outside the village area, disks made by grinding down potsherds were found. These had either a single large hole or a pair of smaller holes drilled through them, as may be seen from the selection illustrated in Pl. LII B. The disks with two holes are so like large buttons that it is difficult to imagine any other use for them, but no wear due to threading is discernible. The objects Nos. 13, 15, and 16 in the plate are fragments of pottery rings, of roughly triangular section, of the same kind as those found at Jebel Moya. Such fragments were comparatively rare at Abu Geili. Both disks and ring fragments can safely be attributed to Period I and they belong more probably to classes 1 and 2 than to class 3.

WHEEL-MADE POTTERY

The types of wheel-made pottery, as far as they could be recovered from the available fragments, are shown in Pl. XXXI; some of the very few complete pots which have survived are illustrated in Pl. XLIII. All the wheel-made pottery, with the exception of O.C.s 487, 608, and 161, types W. 20, W. 24, and W. 31, is of red ware, and although in quantity it was not comparable with the hand-made pottery it was almost as widely distributed. It was found, in one form or another, in 78 rooms and on 133 floors. Here again, it was distributed without any recognisable stratification; sometimes it occurred on the top floors, sometimes on the middle, sometimes on the lowest floors, and occasionally on all floors in a room. One wheel-made bowl of red ware was found in grave 400/100.

It was not possible to determine the frequency with which any particular type occurred, but forms which were common, and of which the fragments were most easily recognised, were cups of types W. 11 to W. 16. Some of them had a stamped decoration, as W. 11 (see also Pl. XL B 10), but more often they were plain, and they were all originally covered with a red slip on the outside.

Types W. 11 and W. 12, especially the former, are Meroitic types found, for example, at Faras,¹ at Karanog² (in this cemetery usually painted), and other sites, and on the whole it seems probable that the cups found at Abu Geili were imported from the north. If they were of local manufacture they were not fashioned by an indigenous craftsman; they give the impression not so much of being clumsily made as of being hastily and carelessly made. The ware is, in most cases, thin and well fired, but it is full of blow-holes and the throwing-rings on the inside of the cups—especially those round-bottomed types W. 13 to W. 16—are very pronounced, as though the potter could not be troubled to smooth them out. The vessels appear to have been quickly and cheaply produced for a not very discriminating market by potters possessed of a skill which they did not exercise to the full. They were probably made during the third to fourth centuries A.D.

Other Meroitic types are the small flasks of red ware W. 22 and W. 23. W. 24 may be a local imitation of a Meroitic type; it is of grey-buff ware and was originally made in two parts luted together as shown by the thickening in the section. On the upper part are the remains of what may have been two handles which have been restored in dotted lines in the drawing. Another object which is almost certainly a Meroitic importation is the small cup O.C. 487 (type W. 20 and Pl. XLIII 5), which is of fine, pale buff ware.

Type W. 25 is a conjectural restoration from a rim fragment of smooth red ware. All that can be said in its favour is that the fragment does not seem to be part of a bowl and that stands (? or seats) of the kind shown in dotted lines have been found on Meroitic sites.³

The types not already specifically mentioned call for no particular comment except the neck W. 30 and the spouts W. 31 to W. 34. These latter are hand-made spouts for wheel-made pots and were rare on the site. W. 31 is of black ware, but another of the same shape is of the more usual red ware. The neck W. 30 is of interest only because it is made of two fitting fragments from adjacent rooms.

COMPARATIVE DISTRIBUTION OF POTTERY

It may be opportune at this point to summarise in tabular form the information regarding the distribution of various kinds of pottery amongst the rooms and floors which has been given at various places in this chapter. It should be emphasised that the figures merely indicate how the different wares were distributed; they do not accurately show the relative quantities of these wares. In comparison with the mass of black-polished pottery with red-filled decoration the amounts of the other wares considered are small.

<i>Type of pottery fragments</i>	<i>Number of rooms in which found</i>	<i>Number of floors on which found</i>
With red-filled impressed decoration .	96	170 = 81%
Wheel-made	78	133 = 64%
Carinated bowls	65	90 = 43%
"Jebel Moya".	41	59 = 28%
With white-filled decoration . .	39	48 = 23%
With yellow-filled decoration . .	11	11 = 5%

¹ *Annals of Archaeology and Anthropology, Liverpool*, vol. XI, Pls. XXIX, XXX.

² *Karanog. The Romano-Nubian Cemetery*. See plates illustrating

painted pottery.

³ See, e.g., *ibid.*, Pl. 73, G. 535. An object of much the same kind, found by Reisner at Meroë, is in the Khartoum Museum.

The total number of rooms dealt with (p. 43) was 99 and of floors 209. The percentage of rooms in which any type of pottery occurred is not given in the table because, as far as it can be expressed in whole numbers, it is the same as the number of rooms.

POTTERY NOT OF LOCAL ORIGIN

As observed above, it is probable that some of the wheel-made red ware cups already described may not have been made on the site. Here, however, it is proposed to deal only with the handful of miscellaneous fragments which are the remains of pottery which must unquestionably have been imported from the Northern Sudan or from even farther afield. These are the fragments of painted or stamped Meroitic pottery and the green-glazed wares from outside the borders of the Sudan.

Most of the fragments of painted Meroitic pottery are illustrated in Pl. XL A. Details of the colours and the provenance of these sherds are given in the Description of Plates on p. 63. Some of them were found on the floors of rooms, at least one at the foot of the cliff, and the remainder outside the walls. Pottery of this kind on other sites is dated to the second to fourth centuries A.D., and such a date accords quite well with the position in which the fragments from Abu Geili were found. The fragments of stamped ware are shown in Pl. XL B. Some of these, *e.g.* Nos. 6 and 13, are probably imported Meroitic; others, such as Nos. 1, 2, 3, 5, and 7, are local imitations, as may be judged from the fact that the stamp impressions on them are the same as those found on the spindle-whorls (Chap. VI). As for the remainder, it is impossible to say with any assurance whether they were imported or not, but it seems likely that the "rosette" impressions on the fragments Nos. 8 and 17 were made by a small stud of the type shown in Pl. LIV B 5-9.

Amongst the green-glazed sherds were two fragments of Chinese celadon; one of them, O.C. 689, was found in square 14, but the provenance of the other is unknown. Although no other pottery of this kind has been recorded from this part of the Sudan, its presence at Abu Geili need excite no surprise. Large quantities are still to be found at Aidhab on the Red Sea coast, an important port in medieval times, and fragments have been reported from as far inland as the Lagia Oasis on the Arbain Road. Arab migrations probably account for this wide, if sparse, distribution.

The other green-glazed sherds, which have the appearance of medieval Arab ware, are not all from the same source; they differ both in the material of the body and in the colour and character of the glaze. Several of the fragments (O.C.s 87, 242, 337, 390, 463, 905, all now in Khartoum) were submitted for examination to Mr. Arthur Lane of the Victoria and Albert Museum, but unfortunately they were most of them too small to enable him to form a definite opinion; he ventured to date only one piece, O.C. 87 from square 2. This was a small fragment, including part of the base ring, of a small bowl of thin ware with a deep blue-green glaze, and Mr. Lane dated it as not earlier than the twelfth century or later than the fifteenth century. Another fragment, he said, was similar to ware from Aden and another might quite well belong to the nineteenth century. Amongst the fragments upon which he preferred not to express an opinion was O.C. 242, which was found at a known level and is marked on the section, Pl. XXI. This fragment has a rough, olive-green glaze, different from the brighter and smoother glazes on the other fragments.

A point of interest which emerges is that Mr. Harden (Chaps. V and VI) dated some of the fragments of glass and some of the beads found on the site to the same period as that to which Mr. Lane attributed the fragment of pottery. There are no other indications of occupation

between Period I and Period II, and the evidence of these fragments of imported wares is not sufficient to establish it. The objects in question could quite well have reached Abu Geili in Period II, some time after they were first made.

THE POTTERY FROM THE GRAVES

A glance at the drawings in Pls. XXXII and XXXIII and the photographs in Pl. XLVI A is sufficient to show that the pottery from the graves is entirely different from that in the rooms and floors. It consists, as will be seen, for the most part of flat open bowls. These bowls are all hand-made, of the same general type, varying considerably in size and slightly in the angle of slope and curvature of their sides. Their colour is not uniform; it seems probable that what was aimed at was a black-polished finish, but this was not often achieved to perfection or, at all events, has not been preserved. To-day some of the pots are black-polished with grey or brown patches; some are brown, and others are of nondescript colours like grey or buff. The ware is not particularly hard and the fracture is usually black.

The bowls are usually circular in plan, but some (*e.g.* G. 24, 26, and 29) are elliptical and others (*e.g.* G. 27 and 28) are nearly square. This form was deliberately designed and was not due to crushing in the kiln, as may be seen from the shape of the base. The kidney-shape, G. 25, however, may be the result of accidental distortion, because the base here is elliptical.

Nearly all the bowls have an incised decorative pattern on the outside, the execution of which varies considerably in quality; some are cut more boldly and deeply and with greater geometrical accuracy than others. No two designs are identical, but the patterns fall roughly into three groups, as may be seen in Pl. XXXII, in which the drawings are as far as possible arranged according to the basic elements of the designs. No symbolic significance can be attached to these patterns; they are purely geometrical, and there is no object in discussing them in detail. One feature common to most of them is a row of punch-marks below the incised pattern which is duplicated on the inside of the rim. On three bowls, G. 1, G. 26, and G. 28, the row of dots inside the rim is replaced by a row of holes which go through the thickness of the wall of the pot. Another curious feature is that nearly all the bowls, as they exist to-day, have two sets of four, or of six, holes pierced through the sides, as indicated in the drawings. The vessels G. 26 and G. 29, however, have four sets of holes—two sets symmetrically disposed on opposite sides of the bowls—and it is possible that four sets may be the normal complement. Many of the bowls have been repaired or restored, and it may be that missing fragments, now restored in plaster and coloured, were fragments perforated with holes. Whatever the purpose of these holes may have been, their presence manifestly renders the bowls useless for holding liquids beyond a certain level and might indicate a purely ceremonial use. There is no evidence to show whether or not bowls of this shape were in ordinary domestic use, but fragments not in graves were sometimes found during the excavations (*see* p. 15 and the section, Pl. XXI). Sherds of similar bowls were also found at Dar el Mek (Pl. LXXXV B).

DESCRIPTION OF PLATES

PLATE XXVII: Pottery types. 1: 6. (The fragments are in Khartoum except where otherwise indicated.)

- I. 1. Red-brown ware, pebble-burnished, with black patches (only a few sherds). From R. 72, F. 2.
- I. 2. Light brown ware, burnished, decoration inside near rim, provenance unknown.
- I. 3. Light brown ware, burnished. From R. 56, F. 3.
- I. 4. Red-brown ware, burnished. From R. 4, F. 3.
- I. 5. Mottled grey-brown ware, burnished outside, black-polished inside. From R. 40, F. 2.
- I. 6. Light brown ware, burnished. From R. 48, F. 3.
- I. 7. Black-polished inside and out. From R. 72, F. 2.
- I. 8. Black-polished inside and out. From R. 115, F. 2.
- I. 9. Smooth red ware, polished on outside. From R. 26, F. 2.
- I. 10. Dark grey-brown ware with black patches. Eighteen impressed dimples on base. Hatching below rim and two diametrically opposed red-filled designs. Marked "Stratum 5".
- I. 11. Black-polished, broken, incomplete, and restored. Incised design with traces of red filling. O.C. 549, above floors in square 15.
- I. 12. Smooth red ware. O.C. 239, 1.30 metres below surface in square 4.
- I. 13. Red-brown ware, discoloured, crudely made and ill fired. O.C. 541, from about 0.30 metre below surface in square 11.
- I. 14. Black-polished inside and out. From R. 92, F. 2.
- I. 15. Black-polished inside and out. From R. 27, F. 4.
- I. 16. Black-polished inside and out. Impressed "rocked" decoration with remains of red filling. O.C. 249, about 0.30 metre below surface in square 5. [Oxford]
- I. 17. Black-polished inside and out, red-filled decoration inside and outside rim. From R. 37, F. 6.
- I. 18. Grey ware with black fracture, polished inside and out, incised decoration with red filling. From R. 51, F. 5.
- I. 19. Light brown ware, burnished inside and out. From R. 2, F. 4.
- I. 20. Red "granitic" ware, polished inside and out. Impressed design of ostriches, white-filled. From "5-metre square W. of *Zariba*". [Institute of Archaeology]
- I. 21. Black-polished inside and out. O.C. 661, from R. 57, F. 3.
- I. 22. Black-polished inside and out, faded. From R. 98, F. 4.
- I. 23. Black-polished inside and out. O.C. 424, from 1.00 metre below surface, in SE. corner of room in square 5.
- I. 24. Burnished grey-brown ware, incomplete and restored. Crudely incised decoration with traces of red filling. O.C. 50, from a floor at 0.70 metre below surface in square 2. (*See* Pl. XLIII 12). [Oxford]
- I. 25. Burnished buff ware with black patches; saw-toothed rim. Provenance unknown.
- I. 26. Black-polished outside and inside rim. Impressed "rocked" decoration with traces of red filling. O.C. 547, from square 13.

- II. 1. Unpolished black-brown ware. O.C. 586, from 1.20 metres below surface in square 19.
- II. 2. Burnished buff ware with black patches, broken and repaired. From grave 400/100/2.
- II. 3. Black-polished inside and out. Incised design with red filling; hatched rim. From R. 24, F. 5.
- II. 4. Black-polished, crudely made, broken and repaired (*see* Pl. XLIII 11). O.C. 48, from above and near floor in square 2.
- II. 5. Burnished buff ware with black patches, black inside, incomplete. O.C. 356, from 1.10 metres below surface in square 7.
- II. 6. Grey ware, polished outside, unpolished inside; "rocked" decoration at base. O.C. 589, from square 13.
- II. 7. Black-polished outside, smooth inside. O.C. 547, from square 13.
- II. 8. Burnished grey ware, incomplete and restored (*see* Pl. XLIII 14). O.C. 38, from face of cliff.

- II. 9. Unpolished black ware, fracture black throughout. O.C. 568, from about 1.00 metre below surface, probably on an old surface-level in the SW. corner of square 18.
- II. 10. Coarse unpolished grey-brown ware, provenance unknown.
- II. 11. Black-polished, incomplete and restored. O.C. 503, from a floor at about 1.50 metres below surface in square 13.
- III. 1. Black-polished inside and out, incised decoration red-filled. Incomplete and repaired. O.C. 607, from above highest floors in square 12.
- III. 2. Black-polished, brown in places, impressed decoration with traces of red filling (about one-quarter of bowl preserved). From R. 66, F. 3.
- III. 3. Black-polished, broken and repaired, decoration impressed with pottery stamp or rocker (Pl. XLIII 18). O.C. 470, from a floor at about 0.60 metre below surface in Room 79, square 15.
- III. 4. Black-polished, impressed design, twice repeated, red-filled. O.C. 172, from 0.75 metre below surface in square 2.
- III. 5. Black-polished inside and out, red-filled design; only part preserved. From R. 72, F. 2.
- III. 6. Dark brown polished outside, black inside. From R. 21, F. 3.
- III. 7. Grey ware, burnished outside, very irregular section, impressed device red-filled. From R. 69, F. 2.
- III. 8. Grey ware, polished both sides, impressed "rocked" decoration (fragment only). From R. 4, F. 4.
- III. 9. Black-polished both sides, hatched rim (fragment only). O.C. 536, from 1.30 metres below surface in square 13.
- III. 10. Black-polished both sides (fragment only). From R. 75, F. 5.
- III. 11. Black-polished, impressed "rocked" decoration, yellow-filled. From R. 4, F. 4.
- III. 12. Black-polished inside and out, impressed design of crocodiles, red-filled. O.C. 174, from about 0.80 metre below surface in square 2.
- III. 13. Grey ware; band of impressed decoration at maximum width. From R. 64, F. 5.
- IV. 1. Black-polished inside and out. From R. 3, F. 4.
- IV. 2. Black-polished, hatching on rim red-filled. From R. 29, F. 4.
- IV. 3. Black-polished, decorative channels impressed with cross-hatched clay rocker. O.C. 253, from between the surface and 0.50 metre depth in square 5.
- IV. 4. Black-polished inside and out. From R. 22, F. 5.
- IV. 5. Black-polished inside and out. From R. 36, F. 4.
- IV. 6. Black-polished outside, smooth inside. From R. 74, F. 4.
- IV. 7. Black-polished inside and out, provenance unknown.
- IV. 8. Black-polished outside, smooth inside. From R. 63, F. 4.
- IV. 9. Coarse black ware, roughly polished inside and out. Incised decoration red-filled; iron-stained, incomplete. From R. 55, F. 4. [Oxford]

PLATE XXVIII: Pottery types. 1: 6. (The fragments are in Khartoum except where otherwise indicated.)

- IV. 10. Black-polished inside and outside. O.C. 36, from 0.75 metre below surface in square 1. [Peabody]
- IV. 11. Black-polished inside and out, decorated band on rocker-impressed background, yellow-filled. From R. 19, F. 4.
- IV. 12. Black-polished inside and out. From R. 18, F. 4.
- IV. 13. Black-polished inside and out. From R. 116, F. 2.
- IV. 14. Black-polished inside and out. From R. 35, F. 3.
- IV. 15. Red ware, polished, with black patches. Channel round top of rim. From R. 75, F. 5.
- IV. 16. Red ware with red slip outside and part way down inside. From R. 101, F. 2.
- V. 1. Black-polished, marked with rust through contact with iron. Crude "rocked" design, originally filled with red, on opposite sides of the pot (400/100/8; see Pl. XXII B 5). O.C. 630.
- V. 2. Black-polished, rather coarse; broken and repaired (400/100/9; see Pl. XXII B 4).
- V. 3. Black-polished, marked with rust (400/100/3; see Pl. XXII B 1).
- V. 4. Black-polished, broken and repaired. Flat rim decorated with zigzag in false relief. O.C. 637, from R. 112, F. 3 (see Pl. XLIII 13). [Oxford]

- VI. 1. Black-polished, broken and incomplete. "Rocker"-impressed design filled with red. Incised and impressed decoration on top of rim. O.C. 43, exposed in cliff face, 1.85 metres below surface, 5.35 metres east of line 3 (see Pl. XLII).
- VI. 2. Mottled grey ware. Fragment only. From R. 9, F. 2.
- VI. 3. Light brown, discoloured, polished both sides. Fragment only. From R. 93, F. 2.
- VI. 4. Black-polished outside, smooth black inside. Fragment only. From R. 119, F. 2.
- VI. 5. Black-polished inside and out, with brown patches. Impressed design repeated three times made with a pottery rocker. Hatched and red-filled rim. From R. 27, F. 4. [Oxford]
- VI. 6. Black-polished inside and out; fragment only. From R. 119, F. 2.
- VI. 7. Black-polished inside and out; incomplete. From R. 103, F. 3.
- VI. 8. Coarse grey-brown ware, crudely made. O.C. 824, from R. 45, F. 4.
- VI. 9. Coarse pot of pinkish-grey ware with four lugs; roughly made; broken and restored. O.C. 651, from square AG. 3-4 (Pl. XLIV 8).
- VII. 1. Smooth black ware. O.C. 253, from surface to 0.50 metre in square 5.
- VII. 2. Light brown burnished ware. From R. 75, F. 3.
- VII. 3. Thin light brown burnished ware. From R. 97, F. 3.
- VII. 4. Red-brown polished ware. From R. 92, F. 2.
- VII. 5. Thick ware, black-polished, marked with rust through contact with iron. Crude design, originally red-filled, on opposite sides. Broken and repaired. From grave 400/100 (see Pl. XXII 7).
- VII. 6. Black-polished, red-filled decoration. From R. 78, F. 4.
- VII. 7. Red-brown ware, polished outside, black fracture. Fragment only. From R. 72, F. 2.
- VII. 8. Fragment of *burma* with thin walls. Coarse red ware, lightly incised design near rim, body covered with mat-marking. O.C. 217, from 0.65 metre below surface in square 3 (Pl. XLVI B 1).
- VII. 9. Smooth red-brown ware. Fragment only. From "X".
- VII. 10. Burnished red ware. Fragment only. Provenance unknown.
- VII. 11. Black-polished outside, and for a short distance inside, rim. R. 62, F. 2.
- VII. 12. Very coarse red-brown ware, black fracture. Decoration roughly and lightly incised. O.C. 379, from 0.90 metre below surface in square 7.
- VII. 13. Coarse, well-fired red ware. Middle third of fracture black. Body from shoulder downwards mat-marked. O.C. 221, from 0.50 metre below surface in square 3 (Pl. XLVI B 2).
- VII. 14. Light brown burnished ware. From R. 32, F. 4.
- VIII. 1. Fragment of large bowl of light brown burnished ware. From R. 56, F. 3.
- VIII. 2. Fragment of large bowl of light brown burnished ware. From R. 44, F. 2.
- VIII. 3. Bowl of red ware, pebble-polished, broken and repaired. O.C. 748, from R. 60, F. 2.
- VIII. 4. Bowl of red ware, broken and repaired (Pl. XLIV 11). O.C. 742, from pit in R. 26.
- PLATE XXIX: Pottery types. 1: 6.** (The fragments are in Khartoum except where otherwise indicated.)
- VIII. 5. Bowl with two horn-shaped lug handles. Red-brown ware, blackened in places by firing. Surface roughened by wiping with a wisp of grass. O.C. 783 from room 21 (Pl. XLIV 7).
- VIII. 6. Black-polished bowl with two horn-shaped lugs. Badly broken and repaired. O.C. 828. [Oxford]
- VIII. 7. Crudely made pot of faded red ware with two handles, broken and repaired. O.C. 704, from R. 61, F. 1 (Pl. XLIV 10).
- IX. 1. Smooth unpolished red ware, blackened in places by firing; broken and repaired, base missing. O.C. 769, from R. 106, F. 1.
- IX. 2. Fine black-polished ware, scratched decoration. O.C. 741, from pit in R. 26 (Pl. XLIII 10).
- IX. 3. Red-brown ware, outside of neck polished. From R. 3, F. 4.
- IX. 4. Fine grey ware, outside of neck polished. From R. 69, F. 2.

- IX. 5. Fine red ware, outside of neck polished. From foot of cliff.
- IX. 6. Red ware with remains of red slip, incomplete, reconstructed from fragments (Pl. XLIII 9). O.C. 429, from about 0.20 metre below surface in square 11.
- IX. 7. Red ware with black fracture, red slip on outside of neck. O.C. 499, from 1.90 metres deep in square 20.
- IX. 8. Burnished red ware. From R. 4, F. 3.
- X. 1. Thick red-brown ware, badly broken and incomplete. Incised design roughly executed. O.C. 790, from R. 43, F. 4.
- X. 2. Coarse grey-brown ware, smoothed on outside only. Incised and stabbed decoration. From R. 40, F. 2.
- X. 3. Smooth red-brown ware, unpolished, black fracture. From R. 66, F. 5.
- X. 4. Black-polished ware. From R. 2, F. 4.
- XI. 1. Very coarse red ware, blackened by firing, crudely made; badly broken and repaired. O.C. 530, from 0.70 metre below surface in square 3.
- XI. 2. Largely a restoration. Original sherds burnished grey-brown with black patches; traces of red filling in incised decoration. Provenance unknown (Pl. XLIII 16).
- XI. 3. Burnished grey ware. From R. 63, F. 3.
- XI. 4. Burnished buff ware, blackened by firing; broken and incomplete. Existing portion put together from small fragments. O.C. 472, from floor in square 15 (Pl. XLIII 17). [Oxford]
- XI. 5. Fine burnished buff ware, blackened by firing; mended from small fragments. O.C. 177, from about 0.40 metre below surface in square 3 (Pl. XLIII 15).
- XI. 6. Faded black-polished ware, decorated with three series of three stamp-impressions, red-filled. From R. 96, F. 2.
- XI. 7. Dark brown ware, burnished. From R. 69, F. 2.
- XI. 8. Black-polished ware. Incised design of two ostriches and two symbols in alternate quadrants (Pl. XLIII 20).
- XI. 9. Black-polished, discoloured, neck broken. From grave 400/100 (Pl. XXII 3).
- XI. 10. Black with red patches, traces of burnish. "Rocked" decoration with traces of red filling. Pattern repeats three times. From grave 400/100 (Pl. XXII 6).
- XII. 1. Black-polished, incomplete. From R. 118, F. 3.
- XII. 2. Grey ware with red slip on neck and shoulder and inside rim; broken and incomplete. O.C. 423, from 0.80 metre below surface in square 5.
- XIII. 1. Black-polished. O.C. 253, from between surface and 0.50 metre in square 5.
- XIII. 2. Black-polished, with decoration of rocker-impressed channels, red-filled. Fragment only. From R. 115, F. 2.
- XIII. 3. As above. From R. 97, F. 2.
- XIII. 4. Black-polished, red-filled decoration round base. From R. 60, F. 4.
- XIII. 5. Red-brown ware, burnished. O.C. 355, from the foot of the cliff.
- XIII. 6. Grey ware, burnished. O.C. 327, from the foot of the cliff.
- XIV. 1. Black-brown burnished. Provenance unknown.
- XIV. 2. Discoloured red-brown ware, black fracture. O.C. 236, from square 2.
- XIV. 3. Burnished grey ware. O.C. 567, square 15.
- XV. 1. Coarse red ware, incised decoration. Bowl discoloured by fire. O.C. 657, from square 19. [Oxford]
- XV. 2. Coarse red ware, roughly incised decoration; fragment only. From R. 101, F. 3.
- XV. 3. Red ware with red slip, black fracture. Four oblique holes in base. O.C. 568, from what was probably an old surface-level at about 1.00 metre from the surface in the SW. corner of square 18.
- XV. 4. Coarse black ware, smoothed but unpolished; incised and stabbed decoration. O.C. 427, from between the surface and 1.00 metre in square 12.
- XV. 5. Burnished grey ware. Holes through base diametrically across at right angles. O.C. 542, from square 16 [Peabody]
- XV. 6. Grey ware, black fracture. O.C. 236, from square 2.

- XV. 7. Red ware, black fracture, incised decoration. Two small fragments only. From R. 62, F. 4.
- XV. 8. Coarse black ware, red slip inside bowl. Four holes symmetrically placed but not bored through base. O.C. 187, from square 1.
- XV. 9. Coarse red ware with red slip. Incised decoration white-filled. Central vertical perforation through base. O.C. 563, from square 13.
- XV. 10. Black ware, polished outside. Three symmetrically disposed horizontal perforations. O.C. 324, from square 4.

PLATE XXX: Large Pots. 1: 8

- XVI. 1. Burnished red ware, broken and repaired. O.C. 781, from R. 19, F. 5 (Pls. XII and XLV 3). [Khartoum]
- XVI. 2. Red-brown ware, pebble-burnished. Broken but complete and repaired. O.C. 703, from R. 105, F. 2 (Pls. X and XLV 2). [British Museum]
- XVI. 3. Burnished red-brown ware. Broken and repaired. Hand-made, not truly symmetrical. O.C. 700, from R. 57, F. 1 (Pls. XI and XLV 1). [British Museum]
- XVI. 4. Three rim-fragments of very large pot: two fitting fragments drilled for lacing in antiquity. Light red-brown ware burnished on outside. Decorated with pairs of originally white-filled lozenges (probably six pairs) set equidistantly round rim. Well fired, middle third of fracture black. (From "stratum 14".) [Khartoum]
- XVI. 5. Light brown burnished ware, diameter uncertain. From R. 43, F. 6. [Khartoum]
- XVII. 1. Thick, coarse red ware, broken but mainly complete. O.C. 708, from R. 73, F. 2 (Pl. XLV 4). [British Museum]
- XVII. 2. Unpolished discoloured red ware; broken and repaired. O.C. 802. [Khartoum]
- XVII. 3. Coarse red ware; broken and repaired. O.C. 746, from R. 60 (*see* Pl. X 1). [Oxford]

PLATE XXXI: Wheel-made pottery. 1: 6. (The fragments are in Khartoum except where otherwise indicated.)

- W. 1. Red ware with traces of red slip, broken and repaired. From grave 400/100 (Pl. XXII 2).
- W. 2. Coarse red ware with groove in top of rim. From R. 60, F. 4.
- W. 3. Red ware with red slip. From R. 79, F. 4.
- W. 4. Polished red ware, black fracture. From R. 1, F. 2.
- W. 5. Polished red ware. From R. 112, F. 2.
- W. 6. Fine red ware, polished inside and out. Provenance unknown.
- W. 7. Red ware with polished red slip. From R. 32, F. 4.
- W. 8. Red ware with polished red slip. From R. 57, F. 3.
- W. 9. Red ware, smoothed but unpolished. From R. 23, F. 4.
- W. 10. Red ware with polished red slip, broken and incomplete. O.C. 416, from square 13 (Pl. XLIII 1).
- W. 11. Red ware, blackened by firing, broken and incomplete. O.C. 540, from floor at 1.50 metres below surface in square 13 (Pl. XLIII 2).
- W. 12. Red ware with traces of red slip. O.C. 471, found inverted on floor at 1.00 metre below surface in square 11 (Pl. XLIII 3). [Oxford]
- W. 13. Bright red ware with traces of red slip. Incomplete and restored. O.C. 529, from square 5 (Pl. XLIII 4).
- W. 14. Coarse red ware with traces of red slip; broken and incomplete. From R. 24, F. 2. [Peabody]
- W. 15. Coarse red ware with traces of red slip. From R. 93, F. 2.
- W. 16. Fine red ware with red slip. "From stratum 5."
- W. 17. Red ware with traces of red slip. From R. 112, F. 2.
- W. 18. Red ware with traces of red slip. O.C. 173, from 0.80 metre below surface in square 2.
- W. 19. Red ware, blackened in places by firing. Broken and incomplete. From R. 24, F. 5.
- W. 20. Fine smooth ware, of a dark cream to pale buff colour. O.C. 487, from R. 51, F. 2 (Pl. XLIII 5).
- W. 21. Polished red ware. O.C. 41, from square 1.
- W. 22. Red ware with bright red slip. O.C. 443, from floor at 0.40 metre below surface in square 3 (Pl. XLIII 7).
- W. 23. Red ware with traces of red slip. Mouth missing and restoration conjectural. O.C. 701, from R. 57, F. 3 (Pl. XLIII 6; *see also* Pl. XI). [Oxford]

- W. 24. Burnished grey-buff ware, very thick, found broken horizontally across middle, showing that it had originally been made in two parts. Restoration of neck and handles conjectural. O.C. 608, from 1.40 metres below surface in R. 45 (Pl. XLIII 8).
- W. 25. Smooth red ware with middle third of fracture black. Only a small fragment exists and restoration is conjectural. From R. 25, F. 5.
- W. 26. Smooth unpolished red ware, broken and incomplete. O.C. 821.
- W. 27. Red ware, broken and incomplete. O.C. 729 (Pl. XLIV 9). [Oxford]
- W. 28. Red ware with red slip. From R. 91, F. 4.
- W. 29. Red ware with black fracture. From R. 31, F. 3.
- W. 30. Red ware with black fracture, roughly made, smoothed but unpolished outside. Built up from two fitting fragments, one from R. 23, F. 4 and the other from R. 24, F. 5.
- W. 31. Spout of smooth grey-black ware, black fracture. O.C. 161, from square 2. (A similar fragment of a similar spout, of hard red ware with red slip, is O.C. 238, found on the surface.)
- W. 32. Hand-made spout, of coarse red ware, for wheel-made pot. From R. 45, F. 4.
- W. 33. Hand-made spout, O.C. 237. From square 1.
- W. 34. Hand-made spout, O.C. 321. From square 3.
- W. 35. Base of large wheel-made pot of smooth red ware. O.C. 756, from R. 4, about 0.3 metre above gebel.

PLATE XXXII: Pottery from graves. 1: 6

- G. 1. Grey-brown, broken and repaired. Row of holes perforating rim. Two sets of 6 holes (Pl. XLVI 2). 400/95/2. [Khartoum]
- G. 2. Faded blackish-brown, broken and repaired; 2 sets of 6 holes; punched decoration inside rim (Pl. XLVI 4). 400/91/1. [British Museum]
- G. 3. Black-polished with brown patches; broken and repaired; punched decoration inside rim; 2 sets of 6 holes (Pl. XLVI 3). 400/9/2. [Khartoum]
- G. 4. Black-polished with patches of brown; broken and repaired; 2 sets of 6 holes; punched decoration inside rim. 400/90/1. [Khartoum]
- G. 5. Black-polished; broken and repaired; 2 sets of 6 holes; punched decoration inside rim. 400/88/1. [Khartoum]
- G. 6. Black-polished; broken and repaired; 2 sets of 4 holes; punched decoration inside rim. 400/17/1. [Khartoum]
- G. 7. Faded blackish-brown; broken and repaired; 2 sets of 4 holes; punched decoration inside rim. 400/18/1. [Oxford]
- G. 8. Smooth unpolished blackish-brown ware; broken, incomplete, and restored; 2 single holes only. 400/48/2. [British Museum]
- G. 9. Black-polished, faded; broken and repaired; 2 sets of 4 holes; punched decoration inside rim. 400/26/1. [Khartoum]
- G. 10. Black-polished, faded; broken and repaired; 2 sets of 4 holes. 400/4/2. [Oxford]
- G. 11. Black-polished, with buff patches; broken and repaired; 2 sets of 6 holes, opposite to each other; punched decoration inside rim. 400/10/2. [Oxford]
- G. 12. Burnished grey-buff with black patches; design lightly incised and not well done; punched decoration inside rim. 400/71/1. [British Museum]
- G. 13. Black-polished with buff patches; broken and repaired; heavily incised decoration; 2 sets of 4 holes; punched decoration inside rim. 400/86/1. [Khartoum]
- G. 14. Black-polished; broken and repaired; 2 sets of 6 holes; punched decoration inside rim (Pl. XLVI 1). 400/30/1. [Khartoum]
- G. 15. Black-polished; incomplete and extensively restored. 400/4/1. [Khartoum]
- G. 16. Smooth dark-brown ware; broken and restored; 2 sets of 6 holes; punched decoration inside rim. 400/92/1. [Oxford]
- G. 17. Black-polished; broken and repaired; 2 sets of 4 holes; punched decoration inside rim. 400/98/2. [Khartoum]
- G. 18. Black, fading to brown; broken and repaired. 400/11/1. [Khartoum]
- G. 19. Unpolished black; broken and repaired. 400/95/1. [Khartoum]

- G. 20. Black-polished; broken and repaired; 2 sets of 4 holes; punched decoration inside rim (Pl. XLVI 5). 400/7/1. [Khartoum]
- G. 21. Polished black-brown; broken and repaired; 2 sets of 4 holes; punched decoration inside rim. O.C. 517, 400/17/2. [Cambridge]
- G. 22. Burnished grey-buff; blackened in places; unusually thick ware. 400/2/2. [British Museum]
- G. 23. Unpolished black-brown; no decoration. 400/92/2. [Cambridge]

PLATE XXXIII: Pottery from graves. 1: 6

- G. 24. Black-polished with buff patches; broken and repaired; 2 sets of 4 holes; punched decoration inside rim. 400/1/1. [Khartoum]
 - G. 25. Smooth red-brown ware, blackened near rim; broken, incomplete, and restored. O.C. 426. [Khartoum]
 - G. 26. Pinkish-buff ware, blackened in one place by firing; broken and repaired; decoration inside rim; row of holes right through; 4 sets of 6 holes, 2 on opposite sides. 400/6/2. [Khartoum]
 - G. 27. Burnished grey-black; broken and repaired; 2 sets of 4 holes; punched decoration inside rim. 400/2/1. [Khartoum]
 - G. 28. Black-polished, faded; broken and incomplete; row of holes right through; 2 sets of 6 holes. 400/6/1. [Oxford]
 - G. 29. Black-polished; punched decoration inside rim; 4 sets of 4 holes, 2 on opposite sides (Pl. XLVI 6). 400/10/1. [Khartoum]
- XVIII. 1. Thick black-brown ware, pebble-burnished. 400/17/3. [Oxford]
- XVIII. 2. Thick black-brown ware, pebble-smoothed. 400/24/1. [Khartoum]
- XIX. 1. Red ware with remains of burnish (Pl. XLIV 4). 400/7/2. [Khartoum]
- XIX. 2. Grey ware, pebble-smoothed, blackened in places by firing; broken, incomplete, and restored; base uncertain owing to restoration (Pl. XLIV 1). 400/86/2. [British Museum]
- XIX. 3. Red-brown ware, very roughly and unevenly made; broken and repaired (Pl. XLIV 3). 400/82/4. [Oxford]
- XIX. 4. Red-brown ware, pebble-smoothed; incomplete and restored. 400/12/1. [Khartoum]
- XIX. 5. Unpolished black ware; asymmetrical (Pl. XLIV 5). 400/29/1. [Oxford]
- XIX. 6. Burnished black ware with buff patches; somewhat crudely made; design not very well done and only lightly incised (Pl. XLIV 2). 400/9/1. [Khartoum]

PLATE XXXIV. Decorated potsherds

A. Miscellaneous fragments

- 1. Black-polished, no trace of filling. From R. 66, F. 2. [Khartoum]
- 2. Black-polished, remains of red filling. O.C. 428, from square 11. [Khartoum]
- 3. Black-polished, deeply impressed design with traces of red filling. From R. 115, F. 2. [Oxford]
- 4. Black-polished, faded, with traces of red filling. From R. 107, F. 2. [Oxford]
- 5. Light brown burnished, no trace of filling. From R. 94, F. 2. [Khartoum]
- 6. Black-polished, right half of each part of design red-filled and left half white-filled. O.C. 428, from square 11. [Khartoum]
- 7. Fine black-polished, red-filled design. From R. 1, F. 2. [Oxford]
- 8. Brown burnished, red-filled design. From R. 40, F. 2. [Oxford]
- 9. Very thick ware, black-polished, faded, with traces of red filling. From R. 70, F. 2. [Oxford]
- 10. Thin ware, black-polished, red-filled design. From R. 101, F. 2. [Khartoum]
- 11. Thick ware, light brown burnished, red-filled design. From R. 96, F. 2. [Khartoum]
- 12. Thick ware with brilliant black polish, red-filled design. From R. 58, F. 2. [Khartoum]
- 13. Black-polished, red-filled design. From R. 116, F. 2. [Khartoum]

B. Fragments of small bowls

- 1. Black-polished, traces of red filling. One part O.C. 561 (from square 11), the other part from R. 25, F. 2. [Khartoum]

2. Brown-polished, traces of red filling. From R. 43, F. 2. [Khartoum]
3. Black-polished, no trace of filling. From R. 7, F. 2. [Khartoum]
4. Black-polished, no trace of filling. From R. 43, F. 6. [Oxford]
5. Black-polished, remains of red filling. From R. 79, F. 4. [Khartoum]
6. Black-polished, no trace of filling. From R. 118, F. 3. [Khartoum]
7. Black-polished, no trace of filling. From R. 44, F. 2. [Oxford]
8. Very thin ware, brown-polished, remains of red filling. From R. 28, F. 3. [Institute of Archaeology]

PLATE XXXV. Decorated potsherds

A. Miscellaneous fragments

1. Black-polished, red-filled design. From R. 101, F. 3. [Oxford]
2. Black-polished, red-filled design. From R. 40, F. 3. [Khartoum]
3. Black-polished, red-filled design. Provenance unknown. [Khartoum]
4. Black-polished, red-filled design. From R. 49, F. 2. [Oxford]
5. Black-polished, red-filled design. From R. 82, F. 2. [Oxford]
6. Brown-polished, red-filled design. From R. 87, F. 3. [Khartoum]
7. Black-polished, with yellow filling in design. From R. 4, F. 4. [Khartoum]
8. Light brown burnished, red-filled design. From R. 18, F. 2. [Khartoum]
9. Light brown burnished, red-filled design. From R. 64, F. 5. [Khartoum]
10. Brilliant black polish, red pigment completely filling impressions of design. From R. 49, F. 2. [Khartoum]
11. Brown burnished, no trace of filling. From R. 88, F. 2. [Oxford]
12. Brilliant black polish, red pigment filling design. From R. 3, F. 4. [Oxford]
13. Black-polished, red-filled design. From R. 2, F. 4. [Khartoum]

B. Fragments of large vessels

1. Part of large black-polished pot, red-filled decoration. From R. 79, F. 4. [Oxford]
2. Part of large black-polished pot, no trace of filling in design. O.C. 48, from square 2. [Khartoum]
3. Part of large black-polished pot, no trace of filling in design. From R. 43, F. 5. [Khartoum]
4. Part of large black-polished pot, traces of red filling in design. From R. 36, F. 2. [Oxford]
5. Part of large bowl of light red-brown ware, blackened by firing, no filling in design. From R. 87, F. 2. [Oxford]
6. Part of large jar of light red-brown ware, red filling in design. From R. 53, F. 2. [Khartoum]
7. Part of large bowl of light red-brown ware, no trace of filling in decoration. From R. 98, F. 4. [Khartoum]
8. Part of large jar of light red-brown ware, red-filled design. From R. 43, F. 6. [Oxford]

PLATE XXXVI. Decorated potsherds

A. Fragments decorated by means of pottery "rockers"

1. Black-polished. From R. 61, F. 4. [Oxford]
2. Light brown burnished. From R. 60, F. 3. [Khartoum]
3. Black-polished, impression red-filled. From R. 104, F. 4. [Khartoum]
4. Black-polished, impression red-filled. From R. 79, F. 2. [Khartoum]
5. Black-polished, impression red-filled. From R. 36, F. 4. [Khartoum]
6. Black-polished, impression red-filled. From R. 91, F. 4. [Oxford]

B. Fragments decorated in zigzag false relief

1. Black-polished, slight trace of red filling. From R. 66, F. 3. [Khartoum]
2. Black-polished, with traces of red filling. From R. 108, F. 2. [Oxford]
3. Brown-polished, with black rim and traces of red filling. From R. 9, F. 2. [Institute of Archaeology]
4. Black-polished, with remains of red filling. From R. 4, F. 4. [Oxford]

5. Part of flat disk of black pottery, inner and outer bands of design yellow-filled, middle band red-filled. O.C. 455, from square 5. [Khartoum]
6. Black-polished, with remains of red filling. From R. 13, F. 2. [Khartoum]
7. Black-polished, with trace of red filling. From R. 29, F. 5. [Khartoum]
8. Thick ware with fine black polish, red-filled design. From R. 82, F. 7. [Oxford]
9. Thick ware, black-polished, remains of red filling. From R. 2, F. 4. [Oxford]
10. Brown-polished, red-filled design. From R. 37, F. 6. [Khartoum]
11. Thick ware, brown burnished. From R. 43, F. 5. [Oxford]

PLATE XXXVII. Decorated potsherds

A. Miscellaneous fragments

1. Burnished buff ware, no filling in design. Provenance unknown. [Khartoum]
2. Dark brown ware, blackened in places by firing, no filling in design. From R. 9, F. 2. [Oxford]
3. Black-polished, faded, trace of red filling in design. O.C. 183, from foot of cliff. [Khartoum]
4. Burnished dark brown ware, red-filled design. From R. 36, F. 4. [Oxford]
5. Burnished light brown ware, blackened at rim, no filling in design. From R. 82, F. 7. [Oxford]
6. Dark brown ware, pebble-burnished. From R. 53, F. 2. [Khartoum]
7. Thick black-polished ware, red-filled design. From R. 104, F. 4. [Oxford]
8. Black-polished, no trace of filling in design. From R. 58, F. 2. [Khartoum]
9. Red ware with red slip on outside. From R. 80, F. 3. [Oxford]
10. Black-polished, no filling in design. O.C. 316, from square 3. [Khartoum]
11. Black-polished, no filling in design. From R. 116, F. 2. [Khartoum]
12. Thick red ware, burnished. From R. 116, F. 2. [Khartoum]

B. Grooved sherds

1. Unpolished red ware. From R. 11, F. 6. [Oxford]
2. Unpolished grey ware. From R. 116, F. 2. [Khartoum]
3. Unpolished red ware. From R. 7, F. 2. [Khartoum]
4. Black-polished. From R. 37, F. 6. [Oxford]
5. Red-brown ware with red slip. From R. 79, F. 4. [Oxford]
6. Thick ware, black-polished. From R. 25, F. 2. [Khartoum]
7. Very thick ware, brown burnished, red filling in decoration. From R. 116, F. 2. [Khartoum]

PLATE XXXVIII. Decorated potsherds

A. Jebel Moya pottery, mainly with "dry scratched" decoration

1. Red ware with red polish. From R. 79, F. 4. [Oxford]
2. Black-polished. From R. 4, F. 4. [Khartoum]
3. Red ware with red polish. Exact provenance unknown. [Khartoum]
4. Fragment of painted pottery. From R. 112, F. 2. [Khartoum]
5. Red ware with red polish. Exact provenance unknown. [Khartoum]
6. Black-polished, faded. O.C. 355, from foot of cliff. [Khartoum]

B. Sherds with incised decoration

1. Dark brown ware, burnished. From R. 117, F. 3. [Khartoum]
2. Black-polished. From R. 117, F. 3. [Khartoum]
3. Red-brown, blackened by firing. O.C. 355, from foot of cliff. [Oxford]
4. Black-polished, faded. From R. 10, F. 6. [Khartoum]
5. Light brown, burnished. O.C. 404, from foot of cliff. [Khartoum]
6. Black-polished, with traces of red filling. O.C. 561, from square 11. [Khartoum]

7. Buff ware, burnished. From R. 36, F. 5. [Oxford]
8. Black-polished, traces of white filling in design. From R. 61, F. 3. [Oxford]
9. Black-polished. From R. 62, F. 4. [Oxford]

PLATE XXXIX. Miscellaneous potsherds

A.

1. Black ware with traces of polish. From R. 19, F. 4. [Khartoum]
2. Red ware with red slip. From R. 36, F. 6. [Khartoum]
3. Red ware with red slip. From R. 65, F. 4. [Oxford]
4. Black ware with traces of polish. Provenance unknown. [Oxford]
5. Black ware with traces of polish. From R. 62, F. 4. [Khartoum]
6. Grey-black ware, unpolished. O.C. 253, from square 5. [Khartoum]
7. Black ware with traces of polish. From R. 93, F. 3. [Khartoum]
8. Brown ware, burnished. From R. 58, F. 2. [Oxford]

B.

1. Part of large pot of very thick, unpolished red ware. From R. 119, F. 2. [Khartoum]
2. Black-polished, faded. From R. 44, F. 2. [Oxford]
3. Rim fragment of large shallow bowl of light brown ware, burnished, decoration on inside with remains of red filling. From R. 89, F. 2. [Oxford]
4. Coarse red ware, unpolished. O.C. 428, from square 11. [Khartoum]
5. Lug handle from a shallow bowl of burnished light brown ware; decoration is on under side, no filling. From R. 56, F. 2. [Khartoum]
6. Part of shallow bowl of black-polished ware; decoration on inside with remains of red filling. From R. 96, F. 2. [Oxford]
7. Part of shallow bowl of black-polished ware with red-filled decoration on inside. From R. 116, F. 2. [Khartoum]
8. Faded black ware, decoration impressed with carapace of a tortoise (?). From R. 107, F. 2. [Khartoum]

PLATE XL

A. Sherds of painted pottery, mostly Meroitic. [Khartoum]

1. Thin buff wheel-made ware, with pale cream slip. Outlines painted in chocolate-brown. Red-brown ground within the circle to the left, pinkish in the adjacent curved zone. O.C. 438. Probably not more than 1·0 metre deep in square 11.
2. Fragment from near centre of base of wheel-made round-bottomed cup or bowl. Painted inside, pale buff, polished but plain outside. Ground red-brown, lines chocolate, small area within loop at the top right, dull yellow. O.C. 680, between the Fung surface and 2·00 metres in square 19.
3. Fragment of rim of wheel-made bowl. Coarse red ware, with white slip inside and out. Outside, two bands of red (illustrated); another just below the rim inside. O.C. 690, between the Fung surface and 2·00 metres in square 20.
4. Rim-fragment, fine thin buff ware, wheel-made. On the outside (illustrated) dark lines in chocolate. A band of red at the rim extends just to the summit. The rest is dull yellow. A trace of red appears within the curved line at the lower edge. Inside not painted or slipped. O.C. 699, from square 17.
5. Rim-fragment of open dish or bowl. Fine thin pale grey-buff ware, no slip. On outside (illustrated) two stripes of pale red and, below these, a zone of stamp-impressions. The inside shows only a single fragment of outline in chocolate. O.C. 452, from square 11.
6. Sherd of fine thin wheel-made buff ware, with white slip inside and out. Outside (illustrated) shows outlines in red-brown on the white ground, a pale red band at the top and a filling of the same colour in the small circle on the right. The inside is plain. Found in R. 4, F. 3.
7. Small rim-fragment of shallow bowl of fine wheel-made buff ware. Inside (illustrated) shows two stripes of chocolate-brown, the upper occupying a turned channel, on a ground of white slip. O.C. 238. Found on the surface.

8. Fragment of fine buff wheel-made ware, plain inside. The outside (illustrated) shows a turned channel separating a stamped from a painted area. The stamp-impression, above, though partly broken away, appears to represent the *udat*, in this form unique on the site. Below are two stripes of pale red-brown and an area of pale red beyond. From R. 45, F. 4.
9. Rim-fragment of a fairly deep wheel-made vessel. Buff ware, cream slip outside (illustrated), plain inside save for a turned channel immediately below the rim. Outside, two stripes of red-brown and a device below outlined in chocolate. From R. 82, F. 6.
10. Fragment of fine buff wheel-made ware with creamy-white slip outside, plain within. Outside (illustrated) is painted in red-brown over the polished slip. From R. 85, F. 2.
11. Fragment of thin buff ware, wheel-made, plain inside. Outlines on outside (illustrated) are in chocolate, the corner within the curve to the right is red and the remainder of the ground dull orange-yellow. From R. 9, F. 3.
12. Rim-fragment of thin buff wheel-made ware, with polished red slip outside (illustrated). The red slip and the polish continue over the lip to the inside, forming a narrow stripe at the rim. The rest is plain. O.C. 327, from the foot of the cliff.
13. Rim-fragment of a cup or bowl. Thin red ware of a rather coarse paste, with red slip on both sides, polished only outside and for a little distance inside the rim. A broad stripe of matt white paint outside (illustrated) covers the polished slip. O.C. 908, from between the modern surface and the Fung surface in square 6.
14. Sherd of thin buff wheel-made ware, thickening towards the bottom in the photograph. Creamy-yellow slip on both sides. The outside was decorated by outlining rather heavily a meshwork of squares in purplish-chocolate and then filling alternate squares with the colour, so that the unfilled squares, instead of being continuous, as in a chequer-board, are separated by the thickness of the outline. From R. 96, F. 4.
15. Fine buff wheel-made ware, thickening towards the top. Prominent and strongly curved throwing-rings on the inside suggest that it comes from near the neck of a narrow-mouthed jar and that this surface was not meant to be seen. In the other examples in the plate, the inside is as carefully smoothed as the outside. A pinkish-cream slip and two stripes of red-brown decorate the outside. From R. 112, F. 3.
16. Fine buff ware with pinkish-cream slip and painted on both sides. The inside (illustrated) has two red stripes below and a device, outlined in chocolate and partly filled with red, above. The reverse shows a narrow zone of pale red-brown delimited by stripes in a deeper shade of the same, with traces of a design in chocolate upon it. From R. 56, F. 3.
17. Fine buff ware, with polished white slip inside and out. The inside is plain. Outside, the outlines and stripes are red-brown, the uppermost zone being filled with dull yellow. O.C. 325, from square 4.
18. Hard buff ware, about 4 mm. thick, pale blue glaze on both sides, the glaze showing iridescent decay. The inside (illustrated) has a design in blue of an indigo shade, of which the outside shows only two small indeterminate patches. O.C. 639, from between the modern and the Fung surfaces in square 17.
19. Another fragment of the same ware and glaze, with similar dark blue design. O.C. 699—of the same provenance as the above.
20. A third fragment of the same, the glaze being much decomposed and decolorized. Dark blue design. O.C. 904, from square 3.

B. Stamped decoration [Khartoum]

1. Fragment of deep bowl. Coarse black hand-made ware, polished outside. Impressions in two zones, made by a stamp having a convex face with an incised cross—or, possibly, with the end of a doubly-split stick or reed. From R. 95, F. 4.
2. Fragment of carinated bowl of dark, hand-made, ware, grey polished outside, black fracture. A row of sub-rectangular impressions above keel (sherd is inverted in the plate). The device is a version of that found stamped on spindle-whorls (Pl. LIX e, f) and carved in the round as an amulet (Pl. L B 1 and 2). From R. 13, F. 2.
3. Ware and stamp-impression of same type as in (1). Impressions filling the decorated area, not zoned. From R. 66, F. 3.
4. Thin, pale buff hand-made ware, smoothed but unpolished, decorated with two rows of lozenge-shaped stamp-impressions. Found among a collection of miscellaneous small objects from square 13, all included under O.C. 677.

5. Sherd of black ware, smoothed outside, polished inside. Stamped as in (3), but with traces of red filling in impressions. From R. 10, F. 6.
6. Sherd reconstructed from three fragments. Thin pale buff hand-made ware, polished outside, covered with finger-prints inside. Fluted pattern of upper part incised and a row of stamp-impressions below this on the shoulder. Device is possibly a degenerate *ankh*. From siftings in square 3.
7. Small fragment of thin grey ware, black-polished outside, with stamp-impressions intended to be as in (1), (3), and (5), but the stamp was defective, having one quadrant broken off. From the foot of the cliff.
8. Fragment of ware similar to (7), but unpolished and with a matt grey surface. Rosette impression may have been made with a small stamp of the type illustrated in Pl. LIV B 1-9. From R. 45, F. 5.
9. Fragment of the neck and rim of a small flask of fine greyish-buff ware. Tool-impressions on the rim, (?) roulette or fine comb-impression on neck. From square 3.
- 10 and 11. Thin red wheel-made ware with red slip, roughly polished outside with zone of stamp-impressions below rim. Device indistinguishable on (10); erect rectangle with horizontal bars in (11). The former is from R. 94, F. 2, the latter from R. 85, F. 3.
12. Thin greyish-buff ware, unpolished. Decoration in false relief. Three linear roulette or comb-impressions. O.C. 326, from square 5.
13. Same ware as above. Finger-prints inside. Pattern of incised rays. From the foot of the cliff.
14. Fragment of a small vessel of pale buff ware, unpolished comb-impressed with a "palm-leaf" design, similar to that incised on spindle-whorls (Pl. LVI A 3; LVII 18). Modern surface down to the Fung surface in square 17.
15. Thin pinkish-buff, (?) wheel-made, ware, polished inside, with a zone of impressed lozenges, similar to (4). From the foot of the cliff.
16. Thin buff hand-made ware, polished outside with finger-prints inside. Impressions are of the end of a hollow tube, probably a reed. From the foot of the cliff.
17. Thickish buff hand-made fragment of the base of a pipe-bowl, unpolished; the beginning of the stem-piece is towards the bottom in the plate. Stamp-impression of a rosette and radiating deep comb-impressions defining alternate plain and comb-impressed areas. Square 6; modern to Fung surface.
18. Thin grey ware, polished outside, with stamp-impressions similar to those in (1), (3), (5), and (7), above. From the foot of the cliff.
19. Thin red wheel-made ware, as (10) and (11). Zone of impressions below the rim made with a bifid-pointed implement. From R. 88, F. 2.

PLATE XLI

A. Pottery implements for decorating pottery

1. O.C. 553, from R. 3, F. 3. [Institute of Archaeology]
2. O.C. 907, from square 11. [Peabody]
3. O.C. 448, from square 15. [British Museum]
4. From R. 23, F. 5. [Khartoum]
5. From R. 55, F. 5. [Oxford]
6. O.C. 237, from square 1. [Institute of Archaeology]
7. From R. 107, F. 4. [Oxford]
8. From R. 35, F. 6. [Khartoum]
9. From R. 33, F. 4. [Khartoum]
10. O.C. 237, from square 1. [British Museum]
11. Provenance uncertain. [Institute of Archaeology]
12. From foot of cliff. [Peabody]
13. From R. 25, F. 2. [Khartoum]
14. From R. 35, F. 6. [Khartoum]

B. Pottery stamps

1. O.C. 468 (? part of ring), from foot of cliff. [Khartoum]
2. O.C. 311, from square 5. [Khartoum]
3. From R. 86, F. 4. [British Museum]
4. From R. 71, F. 1. [Khartoum]
5. O.C. 307, from square 4. [Oxford]
6. O.C. 308 (? part of ring), from square 4. [Peabody]

PLATE XLII

Two photographs of pot O.C. 43, found, incomplete, exposed in cliff face 1·85 metres below surface and 5·35 metres east of line 3. [Khartoum]

PLATE XLIII: Photographs of pots. 1:4

A. Small wheel-made pots. [In Khartoum except where otherwise indicated]

1. Red ware with polished red slip; broken and incomplete. O.C. 416, from square 13. (Type W. 10, Pl. XXXI.)
2. Red ware, blackened by firing; stamped decoration, broken and incomplete. O.C. 540, from floor at 1·50 metres below surface in square 13. (Type W. 11, Pl. XXXI.)
3. Red ware with traces of red slip. O.C. 471, from floor at 1·0 metre below surface in square 11. (Type W. 12, Pl. XXXI.) [Oxford]
4. Bright red ware with traces of red slip; incomplete and restored. O.C. 529, from square 5. (Type W. 13, Pl. XXXI.)
5. Fine smooth ware, dark cream or pale buff in colour. O.C. 487, from R. 51, F. 2. (Type W. 20, Pl. XXXI.)
6. Red ware with traces of red slip; rim missing. O.C. 701. (Type W. 23, Pl. XXXI; *see also* Pl. XI.) [Oxford]
7. Red ware with bright red slip. O.C. 443, from 0·40 metre below surface in square 3. (Type W. 22, Pl. XXXI.)
8. Burnished grey-buff ware, very thick, found broken horizontally across middle, showing that it had originally been made in two parts. O.C. 608, from 1·40 metres below surface in room 45. (Type W. 24, Pl. XXXI.)

B. Small hand-made pots. [In Khartoum except where otherwise indicated]

9. Red ware with remains of red slip; incomplete; reconstructed from fragments. O.C. 429, from about 0·20 metre below surface in square 11. (Type IX. 6, Pl. XXIX.)
10. Fine black-polished ware; dry-scratched decoration. O.C. 741, from pit in R. 26. (Type IX. 2, Pl. XXIX; *see also* Pl. X.)
11. Black-polished, crudely made, broken and repaired. O.C. 48, from above floor in square 2. (Type II. 4, Pl. XXVII.)
12. Burnished grey-brown ware, incomplete and restored; crudely incised decoration with traces of red filling. O.C. 50, from floor at 0·70 metre below surface in square 2. (Type I. 24, Pl. XXVII.) [Oxford]
13. Black-polished, broken and repaired. Flat rim decorated with zigzag in false relief. O.C. 637, from R. 112, F. 3. (Type V. 4, Pl. XXVIII.) [Oxford]
14. Burnished grey ware; incomplete and restored. O.C. 38, from face of cliff. (Type II. 8, Pl. XXVII.)
15. Fine burnished buff ware, blackened by firing; broken and incomplete; existing portion put together from small fragments. O.C. 177, from about 0·40 metre below surface in square 3. (Type XI. 5, Pl. XXIX.)
16. Largely a restoration: original sherds burnished grey-brown with black patches. Traces of red filling in incised decoration. Provenance unknown. (Type XI. 2, Pl. XXIX.)
17. Burnished buff ware, blackened by firing; broken and incomplete; existing portion put together from small fragments. O.C. 472, from floor in square 15. (Type XI. 4, Pl. XXIX.) [Oxford]
18. Black-polished, broken and repaired; decoration impressed with pottery rocker. O.C. 470, from R. 79 in square 15. (Type III. 3, Pl. XXVII.)
19. Black-polished, impressed design, twice repeated, red filled. Broken and repaired. O.C. 172, from 0·75 metre below surface in square 2. (Type III. 4, Pl. XXVII.)
20. Black-polished; impressed design of two ostriches and two symbols in alternate quadrants. (Type XI. 8, Pl. XXIX.)

PLATE XLIV: Photographs of pots. 1: 5

1. Grey-black ware, pebble-smoothed, blackened in places by firing; broken, incomplete and partly restored; base uncertain. 400/86/2. (Type XIX. 2, Pl. XXXIII.) [British Museum]
2. Burnished black ware with buff patches; somewhat crudely made; design roughly and lightly incised. 400/9/1. (Type XIX. 6, Pl. XXXIII.) [Khartoum]
3. Red-brown ware, very roughly and unevenly made; broken and repaired. 400/82/4. (Type XIX. 3, Pl. XXXIII.) [Oxford.]
4. Red ware with remains of burnish. 400/7/2. (Type XIX. 1, Pl. XXXIII.) [Khartoum]
5. Unpolished black ware, asymmetrical. 400/29/1. (Type XIX. 5, Pl. XXXIII.) [Oxford]
6. Smooth grey ware, broken and repaired. Provenance unknown. [Khartoum]
7. Bowl with two horn-shaped lug handles; red-brown ware, blackened in places by firing; surface roughened by wiping with a wisp of grass. O.C. 783 from R. 21. (Type VIII. 5, Pl. XXIX.) [Khartoum]
8. Coarse pot of pinkish-grey ware with four lugs; roughly made; broken and restored. O.C. 651, from square AG 3-4. (Type VI. 9, Pl. XXVIII.) [Khartoum]
9. Wheel-made red ware, broken and incomplete. O.C. 729. (Type W. 27, Pl. XXXI.) [Oxford]
10. Crudely made pot of faded red ware with two handles; broken and repaired. O.C. 704, from R. 61, F. 1. (Type VIII. 7, Pl. XXIX.) [Khartoum]
11. Bowl of "Jebel Moya" ware, broken and repaired. O.C. 742, from pit in R. 26. (Type VIII. 4, Pl. XXVIII; *see also* Pl. X.) [Khartoum]

PLATE XLV: Photographs of large pots. 1: 6

1. Burnished red-brown ware, broken and repaired; wavy bands of incised decoration. O.C. 700, found broken *in situ* in R. 57, F. 1. (Type XVI. 3, Pl. XXX; *see also* Pl. XI.) [British Museum]
2. Red-brown ware, pebble-burnished; broken but complete and repaired. O.C. 703, found broken *in situ* in R. 105, F. 2. (Type XVI. 2, Pl. XXX; *see also* Pl. X.) [British Museum]
3. Burnished red ware, broken and repaired. O.C. 781, from R. 19, F. 5. (Type XVI. 1, Pl. XXX; *see also* Pl. XII.) [Khartoum]
4. Thick, coarse red ware, broken but mainly complete; repaired and restored with much plaster internally. O.C. 708, found broken *in situ* in R. 73, F. 2. (Type XVII. 1, Pl. XXX.) [British Museum]

PLATE XLVI: Photographs of pots

A. Decorated bowls from Fung Graves. 1: 5

1. Black-polished; broken and repaired; punched decoration inside rim; 2 sets of 6 holes. 400/30/1. (Type G. 14, Pl. XXXII.) [Khartoum]
2. Grey-brown ware, burnish gone; broken and repaired; row of small holes perforating rim above decoration; also 2 sets of 6 holes for suspension. 400/95/2. (Type G. 1, Pl. XXXII.) [Khartoum]
3. Black-polished with brown patches; broken and repaired; punched decoration inside rim; 2 sets of 6 holes. 400/9/2. (Type G. 3, Pl. XXXII.) [Khartoum]
4. Faded black-brown ware; broken and repaired; punched decoration inside rim; 2 sets of 6 holes. 400/91/1. (Type G. 2, Pl. XXXII.) [British Museum]
5. Black-polished; broken and repaired; punched decoration inside rim; 2 sets of 4 holes. 400/7/1. (Type G. 20, Pl. XXXII.) [Khartoum]
6. Black-polished, slightly elliptical; punched decoration inside rim; 4 sets of 4 holes (2 sets on opposite sides). 400/10/1. (Type G. 29, Pl. XXXIII.) [Khartoum]

B. Fragments of *burmas*. [Khartoum]

1. O.C. 217. Thin, coarse red ware, lightly incised design near rim, body covered with mat marking. (Type VII. 8, Pl. XXVIII.)
2. O.C. 221. Coarse, well-fired red ware, middle third of fracture black; mat-marked from shoulder downwards. (Type VII. 13, Pl. XXVIII.)

CHAPTER V

BEADS, PENDANTS, AND AMULETS

THE beads from Abu Geili form an interesting and far from homogeneous collection and one which covers widely differing periods of time. A selection of the various kinds found during the excavation is illustrated in the photographs Pls. XLVII to L. It should be made clear at once that, in these photographs, the beads are not in their original stringing. The materials chiefly used are ostrich egg-shell, clay, faience, carnelian, glass, and red paste, though other stones such as agate, quartz, beryl, etc., occasionally occur. Natrolite beads, so common at Jebel Moya, were rarely found at Abu Geili.

It has not been thought necessary to prepare a type-sheet for all the beads. For most purposes of reference the photographs are adequate, and where these do not suffice the symbols on the Jebel Moya type-sheets have been used. There are, however, some types which were not represented at Jebel Moya and for which a type reference would be convenient; these are shown in the small supplementary type-sheets Figs. 12 and 13.

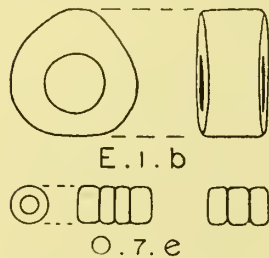


FIG. 12. Types of faience beads. 1:1

It is obvious that small objects such as beads cannot, save in exceptional cases, be individually registered under separate object numbers, and those from Abu Geili are recorded in one or other of two ways. The beads which were found, or sifted from the debris, during the excavation of the squares not encumbered by walls were registered in small collections under object numbers on the usual object cards. The beads from inside the walls were not registered at the time of excavation but were packed, with other miscellaneous small objects from the floors, in adequately labelled bags. The sorting of the contents of these bags was not undertaken until work on this publication began, and the beads which were separated out formed another series of small collections marked with the appropriate room and floor number. The effect of this dual registration is to divide the beads into two groups, one from outside the walls and one from inside, and certain differences between these groups will become apparent in the course of this chapter. Broadly speaking, the differences are those between Period I and Period II. It should be added that the few beads from graves are registered either under object numbers or grave numbers.

From this description of the way in which the beads were found it will be realised that each of the small collections in both groups consisted of a number of beads of different kinds, and possibly of different dates, having no necessary original connection with each other. Except in a few graves, and in a single instance which will be referred to later, no clusters or agglomerations of beads which might originally have formed complete necklaces were ever found. This, then, is the reason why original strings are not, and cannot be, shown in the photographs. In these latter the beads are strung as now seen because it was the most convenient method of keeping the different kinds together and of displaying them for photography. Each short string consists of beads which, individually or in twos or threes, were found at different times and recorded under different

numbers. It follows also that several beads from one object number may be separately shown as components of different strings.

SHELL BEADS

As might be expected, disk beads of ostrich egg-shell were the kind most commonly found and there can be little doubt that they were made locally. They were found, often with fragments of shell, in 43 of the rooms and on 51 floors, and they were also encountered in the routine course of excavation in the squares outside the walls. Curiously enough, they are not recorded from graves, except for a few, which may have been intrusive, in the filling of grave 400/16. Their total bulk was not comparable with the volume of similar beads found at Jebel Moya, but on that site large numbers were used in the making of bead aprons for women and girls. There is nothing to suggest that they were used for this purpose at Abu Geili, and it is reasonable to assume that here they were worn strung in the usual manner as necklaces or wristlets. The beads vary in size, but they are on an average smaller than those from Jebel Moya and on the whole better made. In particular the central hole is drilled more cleanly and there is much less countersinking left on either side than is visible on comparable beads from Jebel Moya. A complete range of sizes, selected from various collections, is shown at No. 2 in Pl. XLVII A. The largest sizes were the least common but were by no means rare.

CLAY BEADS

The other beads which are likely to have been made locally are the clay beads, examples of which are illustrated in Pl. XLVII B. Some are of unbaked clay, others have been fired, and they vary widely in size, shape, and finish. Barrels and bi-cones predominate, which is only to be expected considering how easily and naturally such forms result when twisting a piece of clay between the fingers of two hands. Square beads of the shape shown at No. 3 in the photograph are exceptional, though here again it can be seen how simply and quickly they could be made.

These clay beads were found scattered about the site both in the rooms and in the squares outside. There is nothing remarkable about their distribution and the varieties of shape do not appear to have any particular significance. It seemed, then, hardly worth while compiling an exhaustive type series, neither is anything to be gained by further consideration of these not very interesting objects.

The beads remaining to be dealt with must almost certainly have been imported, some of them from very far afield.

FAIENCE BEADS

The various types of faience beads are shown in Pl. XLIX A. The kind most frequently found were cylinder beads, No. 7 in the plate, which on the Jebel Moya classification are of types D. 7. d and D. 7. e, with an occasional tubular bead D. 7. f. Somewhat less numerous were the ball beads, No. 6, of types A. 5. c to A. 8. c. These ball beads were made of indifferent material and most of them have lost whatever coloured glaze they may have once possessed. The cylinder beads are in better condition and on many of them the glaze, a pale green in colour, is comparatively well preserved. Also, as well as being more numerous, they were more widely

distributed than the ball beads. The cylinders were found, at times only singly, in 34 rooms and on 43 floors, and 34 of the 92 collections of beads registered under object numbers contained at least one faience cylinder. The ball beads, on the other hand, were not found in the rooms at all, and they occur in only 11 of the other collections. This, together with the difference in quality, suggests that the ball beads do not belong to the same period as the cylinders. A few of each kind were found in grave 400/8, and some ball beads in grave 400/16, otherwise they are not recorded from graves.

The ball and cylinder beads are, of course, common types which call for no particular comment; their appearance at Abu Geili excites no surprise. But two other types of faience beads, encountered with some frequency on the site, are unusual; one is a large irregular, rather crudely made bead, in shape something between a ring bead and a short cylinder, and having a bright blue-green glaze. Examples of this kind of bead are shown in Pl. XLIX A 1 to 5; as will be seen, they vary considerably in size. The other is a segmented cylinder bead, sometimes with a pale green glaze but more often with the glaze faded, of the kind seen at No. 9 in the plate. Both types are drawn in Fig. 12 with the type symbols which have been allotted to them for convenience of reference.

The segmented beads are from 4 to 6 mm. in diameter and the number of segments varies from three to four; the diameter of the perforation is usually about half that of the bead. They are interesting as showing a reversion to an early type, a type, moreover, similar to that which was found associated with barrow burials in the Middle Bronze Age in Britain. The subject of segmented beads and their wide distribution has been exhaustively dealt with by Beck and Stone,¹ who show that, while such beads have been found in western Europe and in India, Mesopotamia, Persia, and Palestine, great quantities came from Egypt, where they were most abundant during the period of the XVIIIth dynasty. The Egyptians continued to make faience segmented beads at least as late as the time of the XXIIIrd dynasty, but after that period they are not very common.

With a history such as this the presence of faience segmented beads at Abu Geili is not easily to be accounted for. On that site, it may be added, they were less numerous than the cylinder beads but more widely distributed than the ball beads. They were also more often found outside the walls than in the rooms. They occurred, in odd ones and twos, on only 7 floors, though in fourteen of the groups registered under object numbers. None were found in graves.

The present writer has not himself previously seen any segmented beads from the Sudan, but is indebted to Mr. A. J. Arkell for the information that a few segmented beads of opaque blue glass were found, with Meroitic graves, and with a grave of later date, at Khartoum.² Blue glass segmented beads were also found by Kirwan in the course of the Oxford University excavations of the X-group sites at Firka. These examples show that the segmented *form* was present in the Sudan at periods covered by the occupation of Abu Geili, but the material in all these cases was blue glass, while that of the Abu Geili beads is pale green faience. Two similar beads were found at Saqadi and one at Dar el Mek, but none have been found elsewhere.

The large beads E. 1. b appeared much less frequently in the rooms than outside the walls. While they were found—sometimes singly and more often fragmentary than whole—on only 6 floors, they appear in 32 of the small O.C. collections. They were found in only 2 graves, *viz.* 400/8 and 400/88. Beads of this kind have not, within the writer's knowledge, been found any-

¹ *Faience Beads of the British Bronze Age*, by H. C. Beck and J. F. S. Stone, *Archaeologia*, vol. LXXXV.

² During Mr. Arkell's excavations there, now (November 1947) in course of publication under the title *Early Khartoum*.

where else in the Sudan except at Dar el Mek. On that site they were unquestionably contemporary with the same kind of faceted carnelian beads as were found at Abu Geili and which (see below) are of comparatively late date. The large faience beads from Abu Geili may, therefore, without hesitation be assigned to Period II of the site.

The somewhat crude spirally wound beads, Nos. 8 and 10 in Pl. XLIX A, are of a type which was rare at Abu Geili, while the decorated beads Nos. 11 and 12 are the only specimens of their kind found on the site. No. 11, with badly worn and discoloured glaze, is from Room 40, Floor 2. No. 12 (O.C. 463) has a lapis-blue glaze and was found at the foot of the cliff.

GLASS BEADS

The glass beads were widely but sparsely scattered over a considerable area and belong to periods even more widely spaced out in time. Their aggregate bulk, however, was not large; indeed, all the polychrome and nearly all the black-and-white beads which were found are shown in Pl. XLVIII B. Beads of plain colours, Pl. XLVIII A, were more numerous, though even of these not enough of most kinds were found to make a necklace of reasonable size. Clearly, all the glass beads must at one time or another have been accidentally lost and trodden into the dust.

The kind most often met with, and the best preserved, were small ball or cylinder beads of opaque glass such as those illustrated at Nos. 2 and 3 in Pl. XLVIII A. Those at No. 3 are yellow; those at No. 2 are mostly green with a few blue-green or blue, and they have been selected at random from various O.C. collections. These beads have suffered little or no surface decomposition so that they look to-day remarkably fresh and new. Most of them were collected outside the walls, including a few from the filling of graves, but they were also found in very small numbers in 27 rooms and on 35 floors. Equally fresh and well preserved, but less common, were black glass beads of the kind shown at No. 8 in the photograph, and red-brown glass (? red paste) such as those at Nos. 4 and 6 in Pl. XLVII A. With occasional rare exceptions, beads of the sort described in this paragraph were the only kinds to be found in the rooms.

The ball beads, Nos. 5, 9, and 11 in Pl. XLVIII A, were made of a glass less resistant to decay than the material of the beads just described. This glass was probably originally quite clear, but the beads when found were covered with a white iridescent encrustation which flaked away fairly easily, leaving a "ground glass" surface. The colour thus exposed, best seen against the light, was either a green somewhat deeper than emerald, or, more rarely, a handsome peacock-blue. All the blue ones found are shown at No. 9 in the plate; those numbered 5 and 11 are green, but there are differences between these which probably indicate that they were made at different times. Not only are the beads at No. 11 larger than the others but the iridescent patina on their surfaces was much thinner, which probably shows the glass to be of a different chemical composition.

The beads No. 7 in the same photograph are wire-wound beads of opaque dull green glass. They were not very common, although one was found in Room 82, Floor 4. Another wire-wound example is the large bead of blue glass, No. 4 in the plate. Of the remaining beads in this photograph, No. 10 is of clear red glass, No. 1 is of variegated red-and-white opaque glass, and No. 6, also of opaque glass, is a mixture of white, yellow, brown, blue, and black.

Other polychrome beads are Nos. 1, 3, and 5 in Pl. XLVIII B, the colours here being red, white, and blue. No. 1 is of the same kind as No. 3, but facets have been ground on it; no others ground in this manner were found. The small cylinder beads No. 2 are blue on the outside but

have a white body with a wavy, coloured band running through it. The objects No. 6 are long beads of square section, one of transparent brown glass, the other of blue. The remaining beads in this photograph are of black glass with white marvered threads. They were found separately at different times and are strung as shown simply to keep the various kinds together, as already explained on p. 68. Before leaving the subject of the beads shown in Pl. XLVIII B, it is important to note that no polychrome beads were found in the rooms and that only two black-and-white beads were found in that area.

We turn now to the question of the date of the glass beads. The objects were submitted to Mr. D. B. Harden, of the Ashmolean Museum, who was kind enough to furnish the information upon which the following notes are based, but who at the same time suggested that Mr. A. J. Arkell's opinion should be sought. Whilst not venturing to assign a precise date to any individual type, Mr. Harden divided the beads into groups belonging to three main periods, A, B, and C, as follows. A, Roman or Byzantine (?3rd–7th cent. A.D.); B, Early Arab (9th–13th cent.); C, Comparatively modern (17th cent. onwards). The beads in group A are those shown in Pl. XLVIII A; group B are the black-and-white beads Nos. 7 to 13 in Pl. XLVIII B, and group C are the polychrome beads Nos. 1 to 6 in the same photograph. Going into further detail Mr. Harden observes, of the beads in group A: "The large polychrome one 334 [Pl. XLVIII A 6] is of a type we found constantly in Karanis. The five unnumbered strings [*i.e.* Pl. XLVIII A 2, 3, 5, 8 and Pl. XLVIII B 4] are all of types which, if found in this country, I would not hesitate to call Saxon of sixth to seventh century (indeed some of the Saxon beads of the period may well have been imported from Egypt or the Eastern Mediterranean). The dark-blue string [Pl. XLVIII A 9] and the red double bead 567 [Pl. XLVIII A 10] are also paralleled in late Roman layers in Egypt, I think." Of group B he writes: "These, which are all white marvered (*i.e.* applied and rolled in) threads on black glass are very like—and perhaps made in the same factories as—small white and black ointment bottles of the period." As for the polychrome beads in group C, "these", says Mr. Harden, "are well known Venetian types—so-called chevron or star beads—which are (or were before the war) still made in Czecho-Slovakia".

When Mr. Arkell had an opportunity of examining the beads he expressed a qualified agreement with the foregoing. He agreed that the small blue, green, and yellow beads in Mr. Harden's group A might well be as early as the third to seventh century A.D., but pointed out that, as the manufacture of such beads has continued until the present day, individual beads, or small quantities, are in themselves virtually undatable. He supported Mr. Harden's opinion as to the date of the polychrome beads in group C, but was inclined to make reservations as to that of the black-and-white beads. Those with marvered threads might, he conceded, be of early Arab date, but the plain black and white, such as No. 11 in Pl. XLVIII B, could well be late, as beads of this kind, of modern manufacture, can be bought in the Sudan to-day. Still, the presence of a few possibly modern beads at Abu Geili is not a matter for surprise, and on the whole Mr. Harden's three periods agree very well with the evidence of the other objects found on the site. Glass beads in small numbers were found in some of the graves, in the filling rather than on the body; but as such beads can have been picked up on the site at any time from the third century A.D. onwards their presence in a few graves of late date is easily to be accounted for.

A point which seems to be established as a result of this dating is that the glass beads found in the rooms were only those of the earliest period mentioned by Mr. Harden.

FACETED BEADS OF CARNELIAN AND AGATE

Faceted beads of carnelian and—more rarely—of agate were encountered with some frequency at Abu Geili, although very few were found in the rooms. A selection of them is illustrated in Pl. XLIX B, and type drawings of the different forms are given in Fig. 13. A distinction has been made between type N and type R, but it may be doubted if a difference really existed; the edges of these types are usually so worn and rounded by wear that it is now in practice difficult to differentiate between the two. None of the types N, R, and V, *i.e.* those in the two bottom rows in the photograph, are, as far as the present writer is aware, recorded from other ancient sites in the Sudan, nor are they in use there to-day; but agate barrels similar to those at Nos. 2 to 4 in

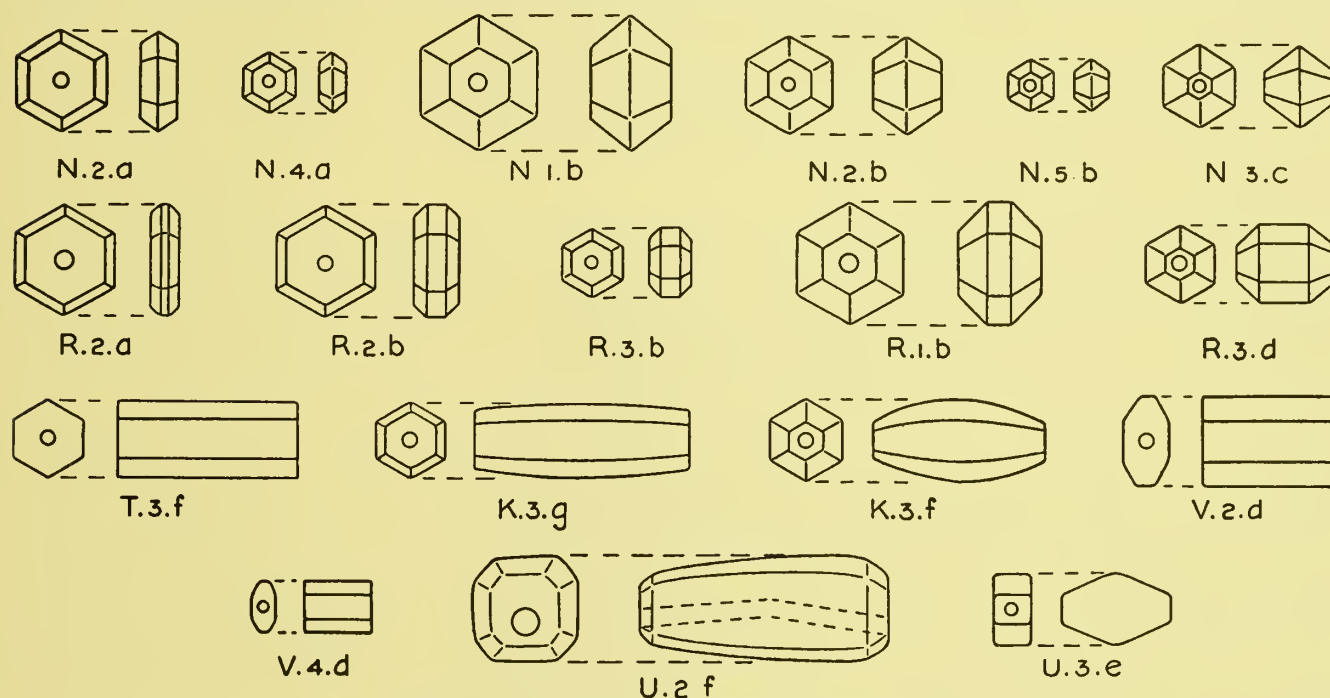


FIG. 13. Types of carnelian faceted beads. 1:1

the plate, and carnelians such as Nos. 6 to 9, are still to be seen. In particular, beads of type U. 2. f, Nos. 1 and 6 in the photograph, are, or were until recently, to be picked up on the site of old Sennar and other old sites on the banks of the Blue Nile in that vicinity.

The subject of agate and carnelian beads in the Sudan was exhaustively discussed some years ago by Mr. A. J. Arkell in an article *Cambay and the Bead Trade* (*Antiquity*, vol. X, p. 292). The types with which Mr. Arkell is chiefly concerned are those similar to Nos. 1 to 4, and 6 to 9 in Pl. XLIX B, and he writes (*op. cit.*, p. 303): "I am convinced that all the agate and carnelian beads described in this article as still to be found in use in the Sudan have come from Cambay; and that they have reached Egypt or the East African coast direct both by sea, and overland via Persia, ever since the industry was started." Further (p. 304), he observes: "There has been a continual stream of agate and carnelian beads of these types from the Cambay vicinity to Egypt and the East Coast of Africa during the last 1900 years. This stream may have been, and probably was, at its greatest volume between A.D. 1300 and 1800 and I consider it possible that most of

the beads of these types now to be found in the Sudan have reached that country since 1300." There can be little doubt, then, that beads of the kind in question found at Abu Geili must at the earliest be of medieval date, and they can without hesitation be assigned to Period II of the site and to class 4 of the finds. The types of beads in the two bottom rows of the photograph Pl. XLIX B are not referred to by Mr. Arkell in the article mentioned above, but, having seen these beads, he considers them to belong to the same period as the other faceted carnelian beads.

As might be expected in view of their date, most of these beads were found during the general excavation of the area north of the mound, or in graves, and were not *recorded* from the village site. A few fragments and one whole bead of this type were, however, recovered from the baskets of debris from the rooms; but a good deal of miscellaneous rubbish was packed in these baskets and occasional contamination may well have been possible.

A string of faceted carnelian beads was found round the waist of the body in grave 400/23 and a short string round the left wrist of the body in grave 400/10 (Pl. XVI 3).

RED PASTE AND OTHER BEADS

The remaining types of beads are shown in Pl. XLVII A. At No. 1 are ball beads of carnelian and limonite of the kind found on sites of the Napatan period, and similar to those which were found at Jebel Moya. The shell beads, No. 2, have already been referred to. At No. 3 are a few beryl beads, two of them from rooms, and at No. 5 are some badly crushed tubular beads of bronze. The rest of the beads illustrated in this photograph are of red paste except, perhaps, those, No. 4, which may be of opaque red-brown glass; they are, at any rate, of the same type and of the same period as the small green and yellow glass beads. The small red paste cylinder beads, No. 6, were not uncommon and were distributed in much the same way as the small glass beads. The tubular beads, No. 7, were also fairly widely distributed. The large beads, No. 8, are all part of the same O.C. collection (O.C. 176) and they were found, with glass and other beads, while digging a hole for a stake in an extension to the Egyptian's *rakuba* marked on the plan Pl. III. They are the group referred to on p. 68, and they form the nearest approach to a complete string found in the whole course of the excavation. Similar beads were found here and there on the site, but they were less numerous than the smaller red paste types.

The milk quartz beads shown in Pl. XXIII are those found with the body (B) in grave 400/100 (p. 30); they are of exactly the same kind as beads found in a grave in the Meroitic cemetery at Faras.¹ These latter were dated by Griffith to the second to third century A.D., but reasons have been given (p. 10) for supposing grave 400/100 to be later than this. A peculiarity of these beads is that the hole is tapered, varying in diameter from 2 mm. at the wide end to 1 mm. at the narrow end. The boring does not appear to have been done from both ends. The pendants shown in this photograph are all that can now be traced of those found with body A in grave 400/100. It is clear from the photograph of the grave (Pl. XXII) that more than five were originally found with the body, but they were taken up with the bones and are now missing.

PENDANTS

The pendants are comparatively few in number and, while not restricted to any particular area of the site, are confined within much narrower time limits than are the beads. Many of them

¹ *Annals of Archaeology and Anthropology, Liverpool*, vol. XI, Pl. LIII 11, and Pl. LXX 12.

are of recognisable Meroitic types and it is probable that most of them were imported. The only kind found in appreciable numbers is that shown at No. 9 in Pl. L A. Pendants of this type were usually made of milk quartz, though carnelian and limonite were occasionally used. It is a type which was found in the Meroitic cemetery at Faras¹ in graves of various dates from the first century B.C. to the third century A.D., and it was found also in the "Romano-Nubian" cemetery at Karanog²—a cemetery in which the graves, according to MacIver and Woolley, are chiefly of the third century A.D. but which may possibly range from the first to the fifth centuries.

Another characteristic Meroitic type, usually made of carnelian, is that seen at Nos. 6, 7, and 8 in Pl. L A. At Faras³ this type was found in graves, some of which were dated by Griffith to the period first century B.C. to first century A.D., and others to the period first to second century A.D. Also Meroitic are the pendants, Nos. 11, 12, and 18 in the photograph. These, instead of being merely drilled for stringing, have separate suspension loops and all—especially the very small pendants, No. 18—are clearly the handiwork of lapidaries of no mean skill. It will be observed that the quartz pendants, No. 12, are of the same kind as those found in grave 400/100 already described.

Some of the remaining pendants in Pl. L A are of types which were in existence during the Napatan period. Those numbered 3, 4, and 5, for instance, are of a kind found at Jebel Moya,⁴ while those at No. 10, and the heart pendant, No. 15, can be paralleled amongst the finds from the cemetery at Sanam Abu Dom.⁵ These may have been persistent types and the examples from Abu Geili are not necessarily to be attributed to the Napatan age.

AMULETS

The objects, such as they are, which can be included in the category of amulets, are shown in the photograph Pl. L B. Details are given in the Description of Plates at the end of the chapter, but some of the objects call for further remark. No. 10, in the middle of the photograph, is the ornament already referred to on p. 17. It is perforated longitudinally for stringing and the design seems not to have been cut but moulded when the material was plastic. The material at first glance looks like fine red sandstone, but is really some kind of vitreous paste.

With the exception of the objects numbered 1 and 2, the remainder of the amulets illustrated are of Napatan types and, as a group, are earlier in date than anything else found at Abu Geili. Three of them—the Amon-Ram head, No. 3, the headless Bes-figure, No. 9, and the small head, No. 13—came from rooms and the remainder from other parts of the site. The small scarab, No. 15, which bears the name Amon, is dated to the early Napatan period (XXVth dynasty) and comes from the siftings of square 1.

It is, however, to the exceptions, to the objects Nos. 1 and 2, that interest chiefly attaches, for the device which they represent is one which had a considerable vogue at Abu Geili. Stamps, and possibly signet rings, bearing variants of the design were frequently used there for marking spindle-whorls (see Chap. VI and Pl. LIX) and occasionally for decorating pottery (Pl. XL B 2). The design, indeed, seems to have been popular over a wide area in the later Meroitic period. A white shell ornament of this shape and an ivory plaque with a similar design were found in the Meroitic

¹ *Annals of Archaeology and Anthropology, Liverpool*, vol. XI, Pl. LXII 12, 13, 19, 23; Pl. LXIII 12.

² *Karanog, The Romano-Nubian Cemetery*, Pl. 40.

³ *Annals*, vol. XI, Pl. LXII 11, 18; Pl. LXIII 10; Pl. LXX 2, 10, 11. *Jebel Moya*, vol. II, Pl. XLIV B 19, 20, 30, 31.

⁵ *Annals*, vol. X, Pl. LX 9; Pl. LVIII 28, 29.

cemetery at Faras,¹ and the same emblem appears on a seal ring, on a bronze bowl, and on a number of painted pots recovered from the Romano-Nubian cemetery at Karanog.² It is, then, fairly safe to conclude that the date of the two objects from Abu Geili is about the third century A.D.

What the significance of this design may have been is now unknown; it is, at least, unknown to the writer and to the expert authorities he consulted, yet it must have had a symbolism which at one time was widely and generally understood.

DESCRIPTION OF PLATES

PLATE XLVII

A. Miscellaneous beads. [All to Khartoum.]

1. Carnelian. From left to right, O.C. 676 (2 beads), from square 8; O.C. 96, from square 1; O.C. 451, from square 15; O.C. 908, from square 6; O.C. 905, from square 15.
2. Ostrich egg-shell, selected from various O.C.s.
3. Beryl. Largest, in centre, is from R. 65, F. 4; next on right is from R. 42, F. 3; remainder are O.C. 643 from square 21.
4. Red paste, selected from various floors and O.C.s.
5. Tubular beads of bronze. O.C. 331, from square 3.
6. Red paste, selected from various floors and O.C.s.
7. Red paste. O.C. 99, from square 1.
8. Red paste. O.C. 176, found in digging a hole for a stake during the building of an extension to the Egyptians' *rakuba*.

B. Clay beads. [All to Khartoum.]

1. O.C. 560, from square 10.
2. O.C. 565, from square 14.
3. O.C. 603, from square 4.
4. O.C. 327, from foot of cliff.
5. O.C. 143, from square 1.
6. O.C. 128, from square 1.
7. O.C. 600, from square 6.
8. O.C. 677, from square 13.
9. O.C. 321, from square 3.
10. O.C. 604, from square 7.
11. O.C. 563, from square 13.
12. O.C. 96, from square 1.
13. O.C. 127, from square 1.
14. O.C. 96, from square 1.

PLATE XLVIII

A. Glass beads. [All to Khartoum except where otherwise indicated.]

1. Variegated red-and-white opaque glass. O.C. 901, from square 15.
2. Small blue-and-green glass, selected from various floors and O.C.s.
3. Small yellow glass, selected from various floors and O.C.s.
4. Blue glass, wire wound. O.C. 366, from square 6, 1 m.b.s.

¹ *Annals of Archaeology and Anthropology, Liverpool*, vol. XI, Pl. LXIV 21; Pl. LXXI 15.

² *Karanog, The Romano-Nubian Cemetery*, Pls. 31, 33, and various plates between 51 and 84.

5. Green glass, originally with iridescent patina, selected.
 6. Variegated colours, white, yellow, brown, blue, and black. O.C. 334, from square 3.
 7. Wire-wound opaque dull green glass. From left to right: O.C. 697, from square 9; O.C. 565, from square 14; O.C. 322, from square 3; O.C. 697, from square 9; R. 82, F. 4; O.C. 603, from square 4; O.C. 601, from square 5; O.C. 562, from square 12. [O.C. 322 to Peabody; O.C.s 565, 601 to Oxford.]
 8. Black glass, selected from various floors and O.C.s.
 9. Peacock blue glass, originally with iridescent patina. From left to right: O.C. 556 (2 beads), from square 5; O.C. 96 (2 beads), from square 1; O.C. 605, from square 8; O.C. 554, from square 3; O.C. 639, from square 17; O.C. 640, from square 18; O.C. 642, from square 20; O.C. 643 (2 beads), from square 21; O.C. 244, from square 3.
 10. Red glass with remains of iridescent patina. O.C. 567, from square 15.
 11. Green glass, originally with iridescent patina.
- B. Polychrome glass beads. [O.C. 908 to Institute of Archaeology; O.C.s 247, 323, 547, 565, 566, 604, 642, 690 to Oxford; O.C.s 236, 322, 325, 560, 564, 689 to Peabody; remainder to Khartoum.]
1. Red, blue, and white "chevron" bead with facets ground on. O.C. 326, from square 5, 50 cm. b.s.
 2. Blue outside, white with coloured band inside. O.C. 642, from square 20; O.C. 604, from square 7; and O.C. 639, from square 17.
 3. Red, white, and blue. From left to right: O.C. 908, from square 6; O.C. 547, from square 13; O.C. 322 (2 beads), from square 3; O.C. 908, from square 6; O.C. 132, from square 1; O.C. 690 (2 beads), from square 20; O.C. 164, from square 2; O.C. 567, from square 15.
 4. Blue. O.C. 604, from square 7, and O.C. 905, from square 15.
 5. Red, white, and blue. O.C. 640, from square 18.
 6. Brown. O.C. 905, from square 15. Blue. O.C. 680, from square 19.
 7. Black and white. O.C. 301, from square 1.
 8. Black and white. From left to right: O.C. 639, from square 17; O.C. 565, from square 14; O.C. 322, from square 3; O.C. 244, from square 3; O.C. 247, from square 2; O.C. 566, from square 15; O.C. 244, from square 3; O.C. 604, from square 7; O.C. 246, from square 4; O.C. 902 (3 beads), from square 7.
 9. Black and white. O.C. 247, from square 2.
 10. Black and white. From left to right: O.C. 639, from square 17; O.C. 244, from square 3; O.C. 236, from square 2; O.C. 247, from square 2; O.C. 325, from square 4; O.C. 560, from square 10; O.C. 322, from square 3; O.C. 325, from square 4; O.C. 247, from square 2; O.C. 323, from square 3; O.C. 564, from square 13; O.C. 689, from square 14; O.C. 246, from square 4; O.C. 562, from square 12.
 11. Black and white. From left to right: O.C. 605, from square 8; O.C. 640, from square 18; O.C. 642, from square 20; O.C. 676, from square 8.
 12. Black and white. O.C. 244, from square 3.
 13. Black and white. From left to right: O.C. 567, from square 15; O.C. 164, from square 2; O.C. 244, from square 3; O.C. 567, from square 15; O.C. 322, from square 3.

PLATE XLIX

- A. Faience beads. [O.C. 98 to Peabody; O.C.s 247, 604 to Oxford; O.C. 908 to Institute of Archaeology; remainder to Khartoum.]

Top row, 1 to 5, type E. 1. b, bright blue-green glaze.

1. O.C. 98, from square 1.
2. O.C. 244, from square 3.
3. O.C. 604, from square 7.
4. O.C. 908, from square 6.
5. O.C. 247, from square 2.
6. Ball beads from various O.C.s; green glaze, faded.
7. Cylinder beads from various O.C.s; green glaze, faded.
8. O.C. 558, from square 8; pale green glaze.

9. Segmented beads, pale green glaze. From left to right: O.C. 164, from square 2; O.C. 301, from square 1; O.C. 247, from square 2; three beads from R. 4, F. 5.
10. O.C. 244, from square 3; pale green glaze.
11. Discoloured, from R. 40, F. 2.
12. Blue. O.C. 463, from foot of cliff.

B. Agate and carnelian beads. [O.C. 908 to Institute of Archaeology; O.C.s 130, 312, 325 to Peabody; O.C.s 370, 690, 904 to Oxford; remainder to Khartoum.]

Top row, 1 to 5, agate, remainder carnelian.

1. O.C. 244, from square 3. Type U. 2. f.
2. O.C. 904, from square 3. Type G. 2. e.
3. O.C. 130, from square 1. Type G. 2. e.
4. O.C. 676, from square 8. Type G. 2. e.
5. O.C. 244, from square 3. Type R. 2. b.
6. O.C. 673, from 401 siftings. Type U. 2. f.
7. O.C. unknown. Type T. 3. f.
8. From R. 5, F. 5. Type K. 3. g.
9. O.C. 676, from square 8. Type K. 3. f.
10. O.C. 563, from square 13. Type R. 3. d.
11. O.C. 244, from square 3. Type R. 3. d.
12. O.C. 164, from square 2. Unclassified.
13. O.C. 905, from square 15. Type N. 1. b.
14. O.C. 370, from square 7. Type N. 1. b.
- 15 and 16. O.C. 676, from square 8. Type R. 3. b.
- 17 and 18. O.C. 908, from square 6. Types R. 2. b and R. 2. a.
19. O.C. 325, from square 4. Type R. 3. b.
20. O.C. 908, from square 6. Type N. 3. c.
21. O.C. 690, from square 20. Type V. 2. d.
22. O.C. 164, from square 2. Type V. 2. d.
23. O.C. 603, from square 4. Type V. 4. d.
24. O.C. 908, from square 6. Type V. 4. d.
25. O.C. 246, from square 4. Type U. 3. e.
26. O.C. 639, from square 17. Type N. 5. b.
27. O.C. 312, from square 5. Type N. 4. a.

PLATE L

A. Pendants. [O.C. 908 to Institute of Archaeology; O.C.s 238, 312, 322, R. 4, F. 3, R. 9, F. 7, R. 26, F. 3, R. 42, F. 2 to Peabody; O.C.s 235, 323, 324, 328, 372, 547, 550, 558, 642, 680, 690, R. 4, F. 5, R. 36, F. 2 to Oxford; remainder to Khartoum.]

1. Pink schist. O.C. 88, from square 2.
2. Rough carnelian. O.C. 690, from square 20.
3. Pink quartz. O.C. 908, from square 6.
4. Carnelian. O.C. 372, from square 7.
5. Grey quartz. O.C. 908, from square 6.
6. Carnelian. O.C. 562, from square 12.
7. Carnelian. O.C. 526, from floor of pit in R. 4.
8. Carnelian. From R. 55, F. 3.
9. Milk quartz except where otherwise specified. From left to right: O.C. 908 (limonite), from square 6; O.C. 238, from surface; O.C. 323, from square 3; O.C. 109, from square 1; from R. 33, F. 4; O.C. 312, from square 5;

- O.C. 547 (limonite), from square 13; O.C. 109, from square 1; also O.C. 109, rough carnelian; from R. 4, F. 3; O.C. 328, from square 3; O.C. 639, from square 17; from R. 26, F. 3; O.C. 550, from square 1; from R. 99, F. 4.
10. Marble (?). From left to right: O.C. 644, from square 22; O.C. 235, from square 1; O.C. 109, from square 1; O.C. 322, from square 3; also O.C. 109.
 11. Green beryl and (centre) milk quartz. From R. 36, F. 2; O.C. 644, from square 22; O.C. 132, from square 1.
 12. Quartz. From left to right: from R. 9, F. 7; O.C. 558, from square 8; from R. 42, F. 2; from R. 4, F. 5.
 13. Brown and white mottled stone. O.C. 680, from square 19.
 14. Quartz. O.C. 469, from foot of cliff.
 15. White stone. O.C. 912, from R. 94, F. 2.
 16. Carnelian. From R. 26, F. 4.
 17. Carnelian. O.C. 322, from square 3.
 18. Carnelian. O.C. 322, from square 3; O.C. 244, from square 3; O.C. 642, from square 20.
 19. Carnelian. O.C. 324, from square 4.
 20. Carnelian. O.C. 562, from square 12.
 21. Syenite (?). O.C. 165, from square 2.
 22. Carnelian. O.C. 126, from square 1 siftings.
 23. Obsidian. From R. 101, F. 5.

B. Amulets. [All to Khartoum.]

1. White stone. From foot of cliff.
2. Ivory. O.C. 688, from R. 21, F. 2.
3. Green beryl. Amon-Ram head from R. 45, F. 2.
4. Pale green glaze, faience. *Udat* from square 4 siftings.
5. Red paste. *Udat*, O.C. 533, from R. 9, between F. 6 and F. 7.
6. Fragment of faience plaque. O.C. 676, from square 8.
7. Fragment of faience plaque. O.C. 167, from square 2.
8. Faience. Headless figure of seated goddess. O.C. 235, from square 1.
9. Faience. *Bes* figure, head missing, from R. 44, F. 2.
10. Vitreous paste resembling red sandstone. O.C. 548, from square 8.
11. Worn faience. Unidentifiable figure with sun disk. O.C. 639, from square 17.
12. Lapis lazuli. Small figure of cynocephalus. O.C. 900, from square 12.
13. Faience. Head of small figure, from R. 44, F. 2. (It does not fit the figure No. 8.)
14. White stone. Scaraboid. O.C. 445, from square 12. It is bored longitudinally like a scarab and has a plain, flat base.
15. Steatite, glaze worn away. Scarab. O.C. 37, from square 1 siftings.
16. Green glaze, faded. Scarab. O.C. 461, from foot of cliff.
17. Faience. Fragment of serrated edge lentoid bead. O.C. 904, from square 3.

CHAPTER VI

MISCELLANEOUS FINDS

STONE

(a) Axes of ground stone

IN comparison with Jebel Moya, where several stone axes were found every day while I was there, the yield of such from Abu Geili was insignificant. Only six were given object numbers and one was found at the foot of the cliff. If others, or portions thereof, were found, they were certainly very few in number. The O.C. numbers were 110, 258, 309, 359, 425, 691; four of them, and that from the foot of the cliff, are illustrated in Pl. LI A.

None of these provenances tell us much, for, being indestructible, the axes may have been lying on the soil before the earliest occupation of the site. Their rarity suggests that they were not in use as axes during the occupation of the village, nor is this at all likely on *a priori* grounds. If such had been the case, far more would certainly have been found. Nearly all of those which were found had been reused as pounders or hammer-stones.

(b) Rings

About a dozen fragments of stone rings were found, three of them, curiously enough, on the floors of rooms. These latter were not registered on object cards but were recovered in 1946 during the sorting of debris from the floors. Seven of the fragments are shown in Pl. LI A, and those not illustrated were O.S.s 71, 254, 323, 325, 554. All of them are of types which occurred in such profusion at Jebel Moya and which have been dealt with at some length in the report on that site. Objects of this kind (as distinct from the cruder rings of sandstone found on some Meroitic sites) belong to a period anterior to that of the rooms and floors, and, as in the case of the axes, it is highly improbable that they were either made or used during the period of habitation of the village. It may be surmised that the fragments found in the debris from the floors had either been picked up elsewhere on the site during the occupation period or brought in from outside. A few other objects registered at the time as rings seem to have been, rather, fragmentary or unfinished archers' looses. The stone pick, O.C. 595, No. 9 in Pl. LI A, is a beautiful object of grey-green porphyry with large pink felspar phenocrysts; it was found on the fourth floor of Room 21. This again is a Jebel Moya type, and its presence on the floor of a room is to be accounted for in the same way as that of the rings.

(c) Pounding-stones, rubbers, etc.

Some miscellaneous objects of this kind are illustrated in Pl. LI B. No. 1 is a sandstone grinding-stone of the kind found at Jebel Moya. No. 8 seems to have been originally an axe-celt and has been reused as a pounder. The object No. 6 in the middle of the photograph is not a pounding-stone but an unfinished archer's loose. No. 4 is a subspherical pounding-stone of grey crystalline rock which is stained with red ochre. It was found in Room 54 on Floor 3. Two more (O.C. 577,

not shown in the photograph), similarly stained, were found in square 10, also on the mound site. Evidently these stones were used for grinding the colouring matter used for decorating pottery, and they must have been used while the village was occupied. Hammer-stones, in themselves, however, are impossible to date. As pointed out on p. 31, they have been in use from the earliest times and some were found in the Fung graves. Any or all of those found on the site, and wherever they were found, could quite well have been brought to Abu Geili at the same early period as were the axes.

(d) Archers' looses

Several perfect, and many broken, stone objects were found, which, at the time, were supposed to be "staff-heads", *i.e.* the tops of walking-sticks; similar objects have been described in other publications. Another, and better, explanation of their use is given below; for the moment we are concerned only with their date. The objects consist of rings of hard igneous rock, or very fine-grained sandstone with coloured markings, and their shape is best seen from the photograph, Pl. LII A. In this photograph, those in the top row, Nos. 1-5, are complete; the others are broken and some are displayed so as to show the section. The outer and inner surfaces have a highly polished appearance, and, though the final finish was more probably acquired during use than during manufacture, there can be no doubt that much time, patience, and skill were lavished on the making of these objects. Many of the stones used are beautiful in themselves and the makers' aim seems to have been to produce something as colourful and decorative as possible.

They certainly belong to class 2 and to a late stage. Two (O.C.s 446, 527) were found on the top floor (F. 1) of Room 9, which is separated (if it be, in fact, distinct from it) from F. 2 by only a few centimetres; and on F. 2 was found part of a "late Roman" glass bracelet. Another (O.C. 535) was found on the top floor of Room 28. Two, one broken (O.C. 380), and one perfect (O.C. 358), were found outside the village area; O.C. 358 was found at a depth of about 1.50 metres, and therefore well below the Fung surface, in the debris washed down from the village mound. Besides the objects separately registered a considerable number of fragments was recovered from the debris of the rooms and floors.

They are found, then, only with class 2 associations, and this is quite in agreement with the fact that similar objects have been found on almost all late Meroitic sites.

The first correct explanation of their purpose was suggested by Emery (*Ballana and Qustal*). Proof of its correctness was obtained by Arkell, who, digging on the Neolithic site at Khartoum Hospital, found stone rings still in position on the right thumbs of skeletons in two Meroitic graves which also contained iron arrow-heads (*Antiquity*, Dec. 1947). Arkell states that a similar form of loose "is still used in Mongolia to enable the archer to draw a stronger bow than he can draw merely by using his thumb and forefinger". May we not connect these bowmen with the Makrobioi of Herodotus and Pliny, whom Last has shown to be not "long lived" but "long-bowmen"? (Herodotus III. 21. 3; *Classical Quarterly*, vol. XVII, 1923, pp. 35-6). Pliny mentions them next after the Megabari, who lived near Meroë, and he seems to be proceeding southwards in his narration.

A great variety of stones was used at Abu Geili, possibly selected for their colour, and four fragmentary specimens were submitted for an opinion to the Petrographical Department of the

Geological Survey, South Kensington. Thanks are due to Mr. K. C. Dunham, of that department, for kindly cutting thin sections and reporting as follows:

"1. A grey recrystallised *dolomite-marble*, composed of hypautomorphic-granular dolomite having refractive index 1.682, and showing well-developed lamellar twinning. Bands of small grains of magnetite cross the rock, probably indicating the positions of former bedding-planes.

"2 and 3. These specimens have been cut from identical rocks, in each case of black and white phanocrystalline type. The constituent minerals are hornblende (black in hand specimen, green and pleochroic under the microscope) in hypautomorphic crystals 1-2 mm. long; feldspars of similar or slightly larger dimensions which have been largely converted into a mixture of clinozoisite and sericite, but which probably included both orthoclase and sodic plagioclase; interstitial quartz, pale chlorite and opaque oxides. The rock may be identified as *altered quartz-diorite*.

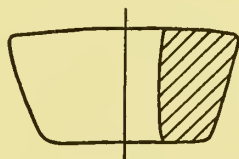


FIG. 14. Archer's loose or mace-head. 1:2

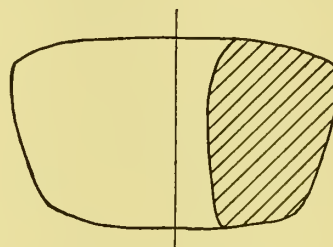


FIG. 15. Mace-head from Pit 4. 1:2

"4. A black and pink *microgranite* composed of microcline, orthoclase, granular quartz, green biotite, apatite and ores. The pink areas, up to 4 mm. long, which look like phenocrysts in the hand specimen, prove to be composed of granular quartz and feldspars varying in grain-size from 0.05-0.4 mm., free from biotite, while in the dark areas biotite is abundant. Micropegmatite occurs in the rock. The pink colour is due to the development of red iron oxide along the cleavages of the feldspars."

It is worth noting that fragments of looses found in different places were found to fit. No. 7 in the photograph, for instance, consists of two fragments, one from Room 83, Floor 5, and the other from the debris at the foot of the cliff. Other fitting fragments are: O.C. 564 (square 13) fits O.C. 607 (square 12) and O.C. 639 (square 17) fits O.C. 640 (square 18).

Yet other fragments which join together are O.C. 601 from square 5 and a fragment from Room 101, Floor 3. These combine to make the object shown in the drawing Fig. 14, which, although of the same shape as an archer's loose, is probably too large to have been used as such. It is made of red-mottled fine-grained hard grey stone. A much larger object, which can only have been a mace-head, is O.C. 474 (Fig. 15). It is of grey-white quartzite and was found in Pit 4, 25 cm. below the surface. Both these objects are now in Khartoum.

METAL OBJECTS

Iron

Iron was comparatively abundant on the village site. Objects of this metal occurred in fifty-seven of the rooms, sometimes on several floors; they were found, too, scattered about the other parts of the excavated area and were registered on over 100 object cards. Many of the small objects were merely amorphous fragments of rust; to others only such non-committal descriptions

as "point", "implement", etc., could be applied. Other fragments, again, may (*see below*, p. 95) conceivably be the remains of currency-units; but there remained a residue of iron objects sufficiently well preserved to present no problem of identification. Of these, arrow-heads in various stages of corrosion were the most numerous, with a smaller number of toilet implements and other miscellaneous objects.

Arrow-heads, or recognisable remains, occurred in twenty-four rooms, sometimes in groups of four or five, and a few were found in the area outside the walls. A selection of them is illustrated in Pl. LIII A, though No. 5 (O.C. 597) may be a small spear-head, or even a pointed two-edged knife-blade, and No. 6 may not be a weapon at all.

The spear-head (or knife) No. 5 was found in square 22, *i.e.* below 2 metres from the surface in square GA, 3-4. This is a very satisfactory provenance, for it is at least a metre below the Fung surface, and the implement may safely be put in class 2.

Arrow-heads with a single barb, such as Nos. 1, 2, 3, 7, 8, 9 in the photograph, were met with more often than those of the leaf-shaped type seen at 13, 14, and 15, but all the types illustrated were in use in Nubia from the second century A.D. to the X-group period.¹ A few were found in the Meroitic cemetery at Faras,² dated by Griffith to the second to third centuries A.D., and many more were found in graves in the Romano-Nubian cemetery at Karanog.³ Nearly all the Abu Geili types can be duplicated from amongst the large collection of arrow-heads recovered from this cemetery. The Abu Geili arrow-heads, then, are probably of much the same date as those found farther north. This agrees very well with the date, based on stratification, given above for the spear-head No. 5.

Other small iron objects are shown in Pl. LIII B and details are given on p. 100. As to the use of some of them it is safer not to hazard a guess, but others, the tweezers and kohl-sticks, for instance, are undoubtedly toilet implements similar to those found at Faras and Karanog, and they probably belong to the same period as the arrow-heads. The larger pair of tweezers, No. 4 in the plate, was found in Room 117, Floor 2, but the smaller, O.C. 293, comes from an unspecified level in square 4. It is possible that both these objects are to be connected with the "trinities" of tweezers, awl, and small spoon whose range in time and space is very great, being found both in the Nile Valley in the early part of the Christian era⁴ and also as far afield as England during the pagan Saxon period. On the other hand, it must be admitted that, while there were many objects from Abu Geili which could safely be identified as awls, there was nothing which closely resembled a spoon. The toilet implement, No. 1 in the photograph, the head of which may originally have been in the form of a hand, resembles one from Karanog⁵ and has traces of a chased decoration on the shaft which cleaning might reveal in greater detail. The knife, No. 6, is O.C. 412, which has already been referred to on p. 37. Objects Nos. 10, 11, and 12 are typical of the many "points" which were found on the site, and Nos. 13-15 are examples of spatulate objects, possibly—but by no means certainly—kohl-sticks.

The object No. 17 (O.C. 341, shown also in Fig. 9) has a shank of rectangular section and one end drawn out to a circular section and bent into a hook; the other end is broken off, so that the complete shape of the implement is uncertain. It bears a fairly close resemblance to the object

¹ *Archaeological Survey of Nubia*, Report for 1908-9, vol. II, Pl. 38, Fig. 8.

² *Annals*, vol. XI, Pl. LVII 1-13.

³ *Op. cit.*, Pl. 34.

⁴ *e.g.* from X-group cemeteries 72 and 79. *Archaeological Survey of Nubia*, Report for 1908-9, vol. II, Pl. 38, Fig. 5.

⁵ *Op. cit.*, Pl. 36, G. 242.

from grave 400/18 described on p. 37, but it is not possible to say with certainty either that this latter object originally had a hook or that O.C. 341 had a spatulate end. The object No. 18 in Pl. LIII B, which also has a hook, was found in Room 9, Floor 4, and ought, therefore, to be much earlier in date than anything of the Fung period. The use of the hooked implements is conjectural. They have not, within the writers' knowledge, been found on other sites in the Sudan, and Mrs. Crowfoot, to whom the objects from Abu Geili were shown, had no suggestions to offer.

The small rings in the centre of the photograph Pl. LIII B, of which quite a number was found, are too small to have served as finger-rings and their use is conjectural. It is not, however, a pure flight of fancy to suggest that the smallest sizes may be the remains of a shirt of chain mail. Protective garments of this kind were still to be found in the Sudan at the beginning of the twentieth century and there is nothing inherently improbable in the suggestion that one such might have reached Abu Geili during the Fung period.¹

Amongst the miscellaneous iron objects not illustrated was one (O.C. 398, now in Oxford) which was probably a fish-hook, and one or two other hook-shaped objects which may have been fastenings analogous to those now sometimes used for securing the lids of boxes.

Copper, etc.

A few miscellaneous metal objects, chiefly of copper or one of its alloys, are illustrated in Pl. LIV A; details of provenance are given in the Description of Plates. No. 2 is a bronze tubular bead imitating the segmented beads to which reference has been made in Chapter V; it is ornamented with incised hatching at both ends. A few short tubular beads of bronze are shown at No. 5. The bronze frog, No. 4, though included amongst the material from Abu Geili, does not appear to have been registered and its provenance is uncertain. It is cast only half in the round, *i.e.* the side not shown in the photograph is flat. It is probably Meroitic in date, as frogs of exactly this conventional design are depicted on several of the painted pots from the cemetery at Karanog.² Some of the frogs on these pots are shown with a flower or stalk (? or possibly a tongue) protruding from their mouths, and this example from Abu Geili may originally have had something of the sort. There is a small stump near the mouth which looks as if a projecting portion had been broken away. The frog was less common in the pottery from the Meroitic cemetery at Faras, but it was found on at least one pot.³ This amphibian seems to have been an object of some veneration during Napatan and Meroitic times—witness the number of small frogs carved in hard stone found in the Napatan cemetery at Sanam Abu Dom and the large sandstone frog seen by Crowfoot on the Meroitic site of Basa.⁴

The object No. 8, of copper, was evidently designed to fit into a shaft or handle, but its use is conjectural. It may have been an ornamental or ceremonial arrow-head, but the eyelets cut in it suggest a possible use as a threading implement.

The ring, No. 11, is, curiously enough, of pewter, with the decoration cast and not cut; it may well be of comparatively modern date. The broken bronze ring, No. 12, has a plain bezel with no trace of a device.

¹ When this was written the objects from Dar el Mek had not been examined. Amongst them was later found a cluster of small iron rings, rusted together, but intertwined in such a way that they could hardly have been anything other than a fragment of chain

mail (*see* p. 174).

² *Op. cit.*, Pls. 54, 57, 60, 66.

³ *Annals*, vol. XI, Pl. XLVII 4.

⁴ *The Island of Meroë*.

The crescent-shaped ear-rings, Nos. 13 and 14, are of a type found in the cemetery at Sanam Abu Dom and also at Jebel Moya; No. 13 is of bronze and No. 14 of silver. The composite ring and cylinder, No. 16, is probably an ornament or handle belonging originally to some other object; alone, as it stands, it would serve no imaginable purpose.

The remaining objects, Nos. 6, 7, 9, 10, are a copper (or bronze) bell and portions of others. No. 10, as may be seen in the photograph, has an embossed decoration. These bells are exactly like those attached to cats' collars or children's toys to-day, having a ring on one side and a slot on the other. The perfect specimen illustrated at No. 6 was found at a depth of 0.60 metre on the floor of a room. Being on a floor, it should belong to class 2 and there is nothing against such a date; but the rooms here, on the northern margin of the village, had been much denuded and some contamination is possible. The point is of little importance, however, for the bells had a very long life and their typology (if any) has never been studied.

The following bells, or parts, were found in addition to those illustrated in the photograph:

O.C. 335, from square 3.

O.C. 413, from square 6.

O.C. 690 (with other miscellaneous objects), from square 20.

O.C. 699 " " " " " " 17.

and two of unknown provenance.

The chief use of these bells was to adorn the harness on the necks of horses and camels. The earliest record of their discovery is in the cemetery of horse-graves at Kurru, near Merawe, excavated in 1919 by Dr. Reisner, who dated it about 700 B.C. Here were found "four strings of very large bronze bells" strung at intervals of a few centimetres on a thick twisted cord which appears to have been fastened to the bridle and to have hung down the front of the neck.¹ Bells were also found in a horse-grave at Gammai south of Wadi Halfa and assigned to the first or second century A.D., and they were common in graves of the X-group period.²

In the church of Abd el Gadir (about A.D. 1000) near the Second Cataract, are wall-paintings of saints mounted on horses having bells hanging from the harness.³ In another Christian church in this area, near Wadi Halfa, a number of bells, of the same type as ours but larger, were found.⁴ They probably played a part in the ritual of the service. The Abyssinian war-horses in Bruce's time, which were obtained from the Kingdom of Sennar, had brass bells on their necks, whose noise, when they charged the Gallas, threw their ranks into confusion,⁵ and this, no doubt, was one of the purposes, perhaps the chief one, for their use. Makrisi describes a victory which was attributed to the same cause; the battle was fought in 854, apparently near Aidhab.⁶

Poncet's companion, Father Brevedent, in 1699 describes the horses of the sheikhs in Dongola Province as having "a large chaplet of little bells, which cause the slightest movement to be heard."⁷ They were still in use in Burckhardt's time, for he records the sale at Shendy of "very small bells (sonaglii) with which they ornament, in Sennaar and Darfour, the camel's bridle and halter".⁸

¹ *Sudan Notes and Records*, vol. II, 1919, 253.

² *Ibid.*, vol. XXVI, 1945, 32.

³ *Annals of Archaeology and Anthropology*, vol. XV, Pls. 35, 36, 43.

⁴ *Churches in Lower Nubia*, by Geoffrey S. Mileham. (Eckley B. Coxe Junior Expedition to Nubia, vol. II), Pl. 38.

⁵ Bruce, *Travels*, VI. 77.

⁶ Burckhardt, *Travels*, 508; Lane Poole, *History of Egypt*,

1901, 42.

⁷ First letter of Father Brevedent (Joseph Duval), dated Sannar, 15th February 1699, and addressed to Father Fleurian, S.J. See the original (in French) printed in Beccari, *Scriptores Ethiopici*, XIV. 60-6.

⁸ Burckhardt, *Travels*, 304.

Krump¹ describes another use for them. On his return journey from Sennar to Egypt, the caravan was accompanied by certain *fakirs* hailing from Bornu and Fezzan, having certain things which seem, from his description, to have been tambourines "studded either with little bells or with little pieces cut out of metal". When they played on them they sang and jumped and made a great noise.

Objects not unlike these bells are shown in an illustration of a Coptic bronze lamp at Dair Tadrus;² they have a loop at the top and bottom connecting the suspension-rods with the horizontal rod to which they are attached. They must, however, have been much larger and of much stronger manufacture than ours, and are merely mentioned here as the discovery of them, or parts of them, in future excavations might puzzle or mislead the finder.

Other objects of copper from Abu Geili which may be mentioned, though not illustrated in the photograph, are a hemispherical cup or bowl, a small pair of tweezers, a bar or ingot, and a broken bezel ring. The cup O.C. 609 [Khartoum] is 8.5 cm. in diameter, but broken, and was found in the third floor of Room 60. A fragment of another bronze cup or bowl was found in Room 101, Floor 4. The tweezers (O.C. 375, from square 5) are similar to, but slightly smaller than, the iron tweezers shown at No. 8 in Pl. LIII B. The copper bar (O.C. 184) is of square section, 5 mm. square and about 7 cm. long, and was found 30 cm. below the surface in square 3. The broken bezel ring, part of a miscellaneous collection of objects registered under O.C. 690, bears an intaglio device the details of which cannot be made out owing to the corroded state of the object.

In addition to the foregoing there were found on the site a few misshapen rings of copper wire, some of which were probably finger-rings while others, smaller, may have been chain links. There were also many fragments of thin sheet copper or bronze which appeared to be the remains of fittings or ornaments originally applied to wooden boxes.

Metal objects from grave 400/100

These comprise two bracelets, one from each body, and an iron "hoe". The bracelets, one of them complete and the other broken, are shown, as they appeared after cleaning, in the photograph Pl. XXIII. They are silver-plated over a baser metal which contains a large proportion of copper. Both, originally, had overlapping finials in the form of a ram's head, but one of these is missing from the broken bracelet. The remaining finial from the latter is, however, better preserved than those on the complete bracelet and it is shown enlarged at No. 3 in Pl. XXIII. The workmanship shows the crude and barbaric qualities that are to be seen in all the late Meroitic art.

The iron implement which was found, broken, underneath one of the pots (400/100/9) is something of a puzzle. It is shown in the photographs Pl. XXIII 4 and 5, the end view being taken with the smaller, broken, part removed. At first sight it resembles a *malod*, a sort of hoe in use in parts of the Sudan to-day, but a second glance is sufficient to show that the implement, if originally a solid forging, could not have been hafted as a hoe. It is, indeed, difficult to see how it could have been hafted at all, yet equally difficult to imagine any purpose for which it could have been used without a haft. It will be seen from the end view of the implement that it is corroded into laminae in the same way as, but to a lesser extent than, the axes described on p. 35. The lamination lines may, and probably do, follow the lines of the original forging, but they also suggest the possibility

¹ *Höher und fruchtbarer Palm-baum*, etc. (Augsburg), 1712, 255-6.

² *Ancient Coptic Churches of Egypt*, by A. J. Butler, 1884, II, 73, Fig. 17.

that the implement was made in two pieces, as indicated in the drawing Fig. 16. If so, the lower part could have been hafted as a hoe, if not very securely, but the function of the loose wedge would still remain to be accounted for. On the whole it seems probable that the object, found as it was in the grave of two children, had a purely ceremonial or magical value, and was never designed for serious practical use. Or could it, perhaps, have been a currency unit? (See p. 95.)

MISCELLANEOUS OBJECTS

Lip-, nose-, and ear-studs. Shell ornaments.

Ornaments of this kind, especially lip-studs, occurred in enormous numbers at Jebel Moya and their use is fully discussed in the volume dealing with that site. At Abu Geili, however, such

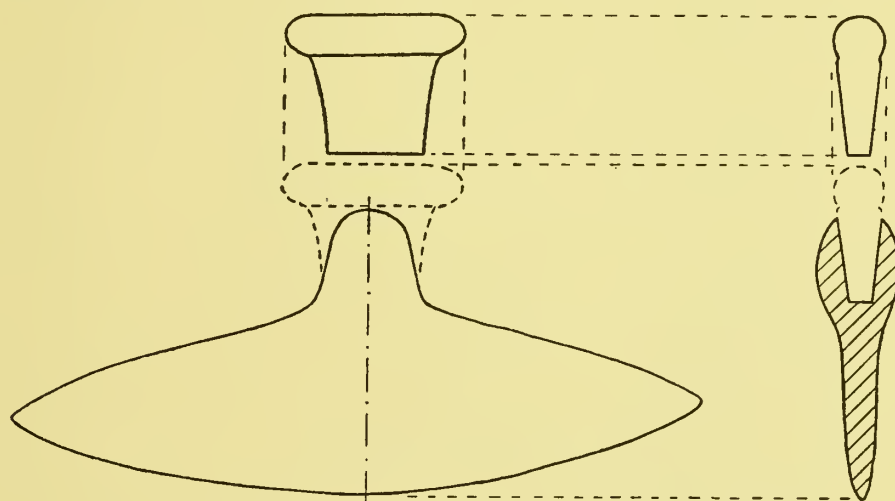


FIG. 16. (?) Iron hoe from grave 400/100. 1:2

objects were comparatively rare and were not found with datable associations. Three small lip-studs of clear quartz, O.C. 673 (Pl. LIV B 20), were found in the siftings from site 401, but only one complete lip-stud and two fragments were recovered from the main site. These were the lip-stud O.C. 603 (Pl. LIV B 5), the head of a quartzite stud O.C. 347 (Pl. LIV B 19), and the head of a stud of natrolite, worn by teeth, O.C. 170 (Pl. LIV B 18). Objects which were probably ear-studs, one of them unfinished, are shown at 21, 22, and 23 in Pl. LIV B. Less rare than any of the foregoing were small pottery studs such as are illustrated in the two upper rows in Pl. LIV B. Most of them have decorated heads, sometimes white-filled, and it is probable that the smaller ones were intended to be worn in the nostril, a practice still in vogue at the present day. The larger ones may have been either nose- or ear-studs, but it is not improbable that some of them may not have been ornaments at all, but pottery-stamps. The object No. 9 in Pl. LIV B, for instance, could well have been used for making such impressions as those seen in the fragments of pottery Nos. 8 and 17 in Pl. XL A.

The small objects in the two bottom rows Pl. LIV B are made from nacreous shell, probably the inside of *Aspatharia rubens*. Whether they were made for ornamental use or merely as a pastime is not known.

Another object the purpose of which is obscure is the ivory rod or point at No. 13 in Pl. LIV B. It is decorated with a series of holes.

Shells

Small shells were used to a limited extent as ornaments, usually, apparently, strung as beads and pierced for stringing when necessary. They were found amongst the debris from the rooms and floors and recovered from the siftings during the general excavation. Cowries, of course, were the most common, but local shells also occurred. A selection of these was sent for examination to the British Museum (Natural History) and the following list of determinations was kindly prepared by Mr. J. R. Le-B. Tomlin:

O.C. 237, sq. 1	<i>Nerita</i> (prob. <i>N. albicilla</i> L.)—not <i>Natica</i>
R. 45, F. 3	
O.C. 567, sq. 15	} Young <i>Natica</i>
R. 59, F. 4	
O.C. 560, sq. 10	} <i>Marginella monilis</i> (Linn.)
O.C. 604, sq. 7	
O.C. 96, sq. 1	
R. 112, F. ?	? <i>Conus</i>
O.C. 246, sq. 4	<i>Volema Paradisiaca</i> (Röding)
O.C. 604, sq. 7	small <i>Conus</i>
O.C. 323, sq. 3	} <i>Oliva ispidula</i> Linn.
O.C. 244, sq. 3	
O.C. 323, sq. 3	} <i>Oliva bulbosa</i> Röding
O.C. 237, sq. 1	
O.C. 554, sq. 3	
R. 82, F. 4	Pyrene
R. 4, F. 3	? Pyrene
O.C. 676, sq. 8	} <i>Engina mendicaria</i> (Lamarck)
R. 98, F. 4	
R. 101, F. 4	

Clay figurines

A few of these were found, and most of them are illustrated in Pl. LV A. The figurines of humped cattle, Nos. 1–4, and the animals Nos. 5–7, are similar to those found at Jebel Moya, but the horses' heads, Nos. 8 and 9, are something different. The latter of these, O.C. 260, found at the foot of the cliff, is markedly different from the other figurines and belongs to a different age; it may well be comparatively modern.

Of the anthropomorphic figurines in the bottom row in the photograph only No. 12 resembles those from Jebel Moya. This, possibly, was a cult-object, but the others, like the animal figurines, were probably children's toys. None of them has any significant provenance.

Spindle-whorls

Spindle-whorls were found at Abu Geili in great profusion. Some of them were recorded singly or in small groups under object-numbers at the time of excavation, but most of them were

recovered from the miscellaneous debris from the rooms and floors and packed in labelled bags. They occurred in varying numbers, and sometimes in fragments, in 88 rooms and on 149 floors; and even after a not inconsiderable number of battered whorls and fragments had been discarded (1946), there still remained well over a thousand of these objects to be examined and classified—a task which devolved on Mr. Cornwall.

They are made of hard, well-fired, and often burnished pottery, generally red, but varying in colour from pinkish-buff to black. In the majority of cases they were decorated, on the upper surface only, though a few were devoid of ornament.

It is, of course, quite easy to identify as a spindle-whorl what is in reality a large bead, and neither of the present writers claims to be immune from error. But they are supported in their view that the objects now in question are spindle-whorls, and not beads, by no less an authority than Mrs. Crowfoot, who, when she saw them, immediately pronounced the objects to be spindle-whorls. They are, it is true, larger and heavier than the wooden whorls used in modern times in the Sudan, but this does not invalidate the identification. A modern one is shown in use in the photograph Pl. LV B—a photograph taken in Abu Geili village at the time of the excavation.

It is clear that the makers of these pottery whorls were not bound by any rigid convention as to shape and decoration. Although most of the objects are of much the same weight and diameter, they exhibit a considerable variety of section, as may be seen in Pl. LVII. Not all these sections are equally common. No statistical analysis of the various types was undertaken, but, from observation it may be said that the most common sections are those with slightly recessed tops, such as Nos. 15, 21, and 27. Bi-cone sections, such as Nos. 13 and 19, were comparatively rare, and Nos. 42–48 are aberrant or experimental sections represented by single specimens only.

The decoration on the upper surfaces of the whorls is either incised or impressed with a stamp, and in most cases was filled with coloured pigment. Incised designs were found on roughly 90 per cent. of the decorated objects examined and stamp-impressions on the remaining 10 per cent. Examples of the former are illustrated in Pl. LVI A, and of the latter in Pl. LVI B. The stamps found on the site have already been described on p. 47.

Some idea of the great variety of incised designs may be gained from Mr. Cornwall's drawings in Pls. LVII–LIX. The patterns are shown in plan and elevation or in development, as seemed most suitable in any particular case. The provenance of each of the examples illustrated, and the colours of the pigments used in the fillings of the incisions, are given in the Description of Plates. Many of the designs fall into recognisable types, or groups, of various sizes. The most common type is, not unnaturally, the simplest, and is a pattern of radiating lines such as may be seen in the half-sections Nos. 26, 27, and 31 in Pl. LVII. These lines were usually very deeply incised and were filled with white pigment or with white alternating with red. This type of decoration was found on about 9 per cent. of the whorls examined. Almost equally common were variants of the "star" pattern seen at No. 1 in the photograph Pl. LVI A and at No. 17 in Pl. LVIII. White, or red and white, pigments were used in the filling of these designs, and three colours, red, white, and yellow, were used on the whorl shown in the photograph. When new, these objects must have presented a very gay appearance. More noteworthy than the colouring, however, is the precision with which these designs were executed. To produce geometrical patterns of this kind with such accuracy on such a medium calls for skill of no mean order, as anyone who tries the experiment for himself will realize. Other fairly common designs are those of hatched or cross-hatched triangles (Pl. LVI A 2

and 5) and of radiating palm-leaves (Pl. LVI A 3 and 4; Pl. LVII 9, 11, 18) which were found, respectively, on roughly 7 and 6 per cent. of the whorls.

Less common, but more interesting, are the bird designs Nos. 13 to 17 in the photograph Pl. LVI A, and shown more clearly, in development, in Pl. LIX 1 to 12. The ducks, Nos. 1 to 3 in Pl. LIX, though on whorls found separately in different parts of the site, were almost certainly drawn by the same hand, and must be roughly contemporary. There is a striking similarity, too, between the designs of ducks feeding, Nos. 4 and 5 in the plate. No. 8 depicts guinea-fowl, and vultures are seen in the designs Nos. 9 to 11, each of them confronted by a crude cross—whatever this may signify. The bird in design No. 12 is more difficult to identify; probably it is a goose, and in front of it is a symbol which might be a degenerate *ankh*.

Another interesting range of designs is that on Nos. 13 to 16 in Pl. LIX, a further variant of which is No. 9 in the photograph, Pl. LVI A. These designs, which resemble, but are not, Egyptian hieroglyphs, suggest Meroitic influence. No. 15, for instance, occurs on a pot found at Faras,¹ while the crescent, with or without embellishment, is a common *motif* on the painted pottery from the cemetery at Karanog² and on other Meroitic pottery. Also probably Meroitic are the design, No. 17, which can only be a winged sun-disk, and the floral pattern, No. 19, which is duplicated on a pot from Faras.³

Before leaving the incised designs, attention may be drawn to yet one more type, the solar emblem, Pl. LVI A 7, and Pl. LVIII 16, 22, 28. This decoration was sometimes found “dry-scratched” on the pottery from Jebel Moya.⁴

Turning now to the impressed decorations, the most common of these, because the easiest to make, are of the type shown at No. 18 in Pl. LVI B. This type is obviously made by jabbing the moist clay with the end of a reed. Two concentric reeds, one inside the other, give the effect seen at Nos. 5, 9, 10, and 12 in the photograph Pl. LVI B. The impressions made by stamps or seals are drawn in Pl. LIX, *a* to *y*. In these drawings, the part of the design shown black is that left in relief in the impression, *i.e.* it is the intaglio of the stamp; the part left white is the depressed part of the impression, which was usually filled with white pigment. The design most frequently met with is a simple cross in a circle, *q* in Pl. LIX, an impression which may be seen on the whorl No. 15 in Pl. LVI B and on the pottery fragments Pl. XL B 1, 3, 5, 7, and 18. Quite possibly this impression was not made with a stamp but with a split reed. Of the other impressed designs, some were probably made by pottery stamps of the kind shown in Pl. XLI: impression *w*, for example, or something very like it, could have been made by stamp No. 17 in Pl. XLI. Others, however, are so small and well formed that they were probably made by signet-rings and the impressions may have been indications of ownership as well as ornamental. It is not clear how far the impressions *a–h* in Pl. LIX are variants of the same design, but *f* is one of the most interesting and the least rare. Besides appearing on spindle-whorls (*e.g.* on Nos. 1 and 3, Pl. LVI B) it is found on the fragment of black polished pottery, No. 2 in Pl. XL B, and is of the same form as the amulets, Nos. 1 and 2 in Pl. L B—amulets which have been shown (p. 75) to be Meroitic. It is somewhat startling to find the swastika on a spindle-whorl (Pl. LVI B 14 and Pl. LIX *r*), but this, too, is probably Meroitic and derives from the Egyptian hieroglyph. The other stamp-impressions call for no particular comment.

¹ *Annals*, vol. XI, Pl. XLV, 13.

² *Op. cit.*, various plates from 44 to 91.

³ *Annals*, vol. XLV, 8 and 13.

⁴ *Jebel Moya*, vol. II, Pl. CII A.

Fortunately the finds are datable on other grounds. Of those registered separately under object-numbers, one (O.C. 672, which has a design similar to Pl. LVIII 13) was found in Room 57, in the earth under the big pot, O.C. 700, and was photographed *in situ* before removal, together with a potsherd of red ware. There is no doubt that they were lying on, or immediately above, the floor (F. 1) on which the big pot was standing (*see* Fig. 5, Room Section 3). This floor was 1.00 metre above "gebel". The big pot is almost exactly of the same type as O.C. 702, found on Floor 4 of Room 31, which was 0.52 metre above "gebel" and had three floors above it. There were probably other floors above Floor 1 in Room 57, which escaped detection; and there were probably others below Floor 6 in Room 31 which were also not seen. The big pots and spindle-whorls must belong to the middle period of the village site. This conclusion agrees with the discovery of two spindle-whorls on Floor 3 of Room 5, at 0.61 metre above "gebel", together with three granite hammer-stones and a bead of green faience. Though it does not follow that all the spindle-whorls found on the site belong to one period, it is certain that these, at any rate, are Meroitic. Since the floors mentioned are only a few of the large number on which spindle-whorls were found, and the floors, as a whole, belong to the middle period of the village site, there can be little doubt, on stratigraphical grounds, that most of the whorls can be assigned to the Meroitic period, which is precisely what might be deduced from a consideration of the designs.

The spindle-whorls as a whole, whatever the type of decoration, do, in fact, form a homogeneous group; they are nearly all well made and the decoration is the work of highly skilled craftsmen—or women. There is, in general, no evidence of deterioration in quality or of degeneration in decorative skill, and it therefore seems probable that, numerous as they are, the whorls were all made within a comparatively limited period of time. The precise limits of this period cannot, of course, be determined, but the middle of it was probably somewhere towards the end of the third century A.D. Any individual woman would probably possess several whorls, as Sudanese women do to-day (or did until recently—hand-spinning may be dying out), and in a populous settlement a very few generations of women might easily account for all the whorls which have been found.

GLASS

Besides the glass vessels already referred to (O.C. 599 on p. 13 and the bottle from grave 400/10 on p. 17) many fragments of glass were found from time to time during the excavations. These also were submitted to Mr. Harden for examination and he was good enough to send the report given below. The fragments were, in many cases, so small that they were difficult to date with any certainty, and the dates marked with a query are not put forward with any assurance.

- | | | | |
|------|------------|----|--|
| O.C. | 16, square | 1. | Fragment of neck with horizontal coil—(?) Arabic. |
| „ | 19, „ | 1. | Fragment of green window-pane of "crown" (bull's-eye) type; <i>cf.</i> Harden, <i>Iraq</i> , VI, No. 1, <i>Roman window-panes from Jerash</i> . This type lasted from late Roman or Byzantine times onwards. |
| | | | Several indeterminate fragments. |
| „ | 168, „ | 2. | Rim of narrow-necked jar (small). Early Arabic. |
| | | | Fragment of thick colourless vessel with milky weathering. (?) Early Arabic. |

- O.C. 246, square 4. Fragment of bluish-green bowl, iridescent decay. Late Roman or Byzantine, *i.e.* (?) 5th-7th centuries.
Fragment of colourless bowl with wheel-cutting, much pitted by sand-blast. (?) Roman or early Arabic.
One indeterminate fragment.
- „ 279, „ 4. Fragment of bracelet, streaky, with enamel-like weathering, and with opaque white coil on rim. (?) Early Arabic.
- „ 322, „ 3. Fragment of bluish-green bowl, which joins the first fragment of No. 246, above
Several indeterminate fragments.
- „ 336, „ 3. Fragment of rim, pale blue, from narrow-necked jar, and fragment of tubular base-ring, pale blue, probably from the same vessel. Both have the same enamel-like weathering. (?) Early Arabic.
- „ 346, „ 3. Shoulder-fragment of small rectangular unguent-bottle. Early Arabic (7th-10th centuries).
- „ 391, „ 7. Fragment of straight-sided bowl, green, with enamel-like weathering. Early Arabic.
Fragment of yellowish bottle (?), hexagonal, mould-blown. (?) Fairly modern.
Fragment of red opaque glass with milky weathering. Date uncertain.
Fragment of flat glass with corrugations on exterior—moulded. Date uncertain.
Two indeterminate fragments, green.
- „ 406, „ 8. Knobbed base or stem, bluish, with enamel-like weathering. Date uncertain.
- „ 439, „ 11. Fragment of large bowl or flask, greenish, much pitted and weathered: traces of rectilinear cutting. (?) Early Arabic.
- „ 453, „ 11. Fragment of bracelet, plano-convex section, (?) black, with marvered opaque white threads on exterior. (?) Late Roman or Byzantine (5th-7th centuries).
- „ 457, „ 11. Fragment of jar with pinched-out trail, enamel-like weathering. Early Arabic (8th-10th centuries).
- „ 463, from base of cliff. Fragment of mould-blown purplish flask in the form of a bunch of grapes (?).
(?) Late Roman (3rd-5th centuries).
Fragment of coral.
Fragment of *stone*, resembling raw glass-melt.
Several indeterminate fragments.
- „ 528, from R. 9, F. 2. Fragment of bracelet, plano-convex section, with transverse nicks on exterior, (?) black, with brown, enamel-like weathering. Late Roman, *cf.* Harden, *Karanis*, p. 282f.
- „ 558, square 8. Fragment of (?) beaker, greenish with milky weathering; but linear pattern. Late Roman (3rd-4th centuries).
Many indeterminate fragments.
- „ 564, „ 13. Fragment of base-ring, large and heavy, green, with enamel-like weathering. Late Roman (4th-5th centuries).
Three indeterminate fragments.
- „ 566, „ 15. Fragment of rim of straight-sided bowl (*cf.* No. 391 above), green, with enamel-like weathering. Early Arabic.
Two indeterminate fragments of colourless glass.
- „ 677, „ 13. Fragment of (?) barrel-bead, black with white marvered combed threads. Date uncertain.
Several indeterminate fragments.

- O.C. 678, square 15. Fragment of green bowl or beaker, thick glass with sunken pattern on exterior only. Early Arabic (8th–10th centuries).
Many indeterminate fragments.
- „ 684, „ 17. Fragment of base-ring, heavy, green, *cf.* No. 564 above.
Spherical bead, green glass.
Numerous indeterminate fragments.
- „ 696, „ 5. Fragment of bowl or beaker, greenish, with milky weathering and parallel, wheel-cut, lines (*cf.* No. 558, above, but not the same vessel). Late Roman (3rd–4th centuries).
- „ 699, „ 17. Rim-fragment of flask, rim cut on the bevel: green, incipient enamel-like weathering. (?) Middle Arabic (10th–13th centuries).
Fragment of corrugated, mould-blown, bowl (?), colourless. Date uncertain.
Fragment of red-brown opaque flask. Date uncertain.
Several indeterminate fragments.
- „ 900, „ 12. Fragment of heavy base of flask with pencil mark, buff colourless. (?) Late Roman.
Fragment of flask or bottle with vertical corrugations, green. Date uncertain.
Several indeterminate fragments.
- „ 905, „ 15. Rim-fragment of flask, rim cut on the bevel (*cf.* No. 699 above, but smaller). Green, incipient enamel-like weathering. (?) Middle Arabic (10th–13th centuries).
Several indeterminate fragments.
- „ 908, „ 6. Knob from vessel (or (?) end of heavy kohl-stick), green with enamel-like weathering. Date uncertain.
Fragment of wall of vessel, buff colourless with raised circular bosses (countersunk on interior—*i.e.* (?) mould blown).
Several indeterminate fragments.
- „ R. 60, F. 3. Fragment of plano-convex bracelet, brownish-black glass. Late Roman (*cf.* Harden: *Karanis*, p. 282 f.).
- „ R. 104, F. 4. Almost complete plano-convex bracelet, brownish-black glass, in 7 fragments, all of which join (*cf.* R. 60, F. 3).

“The following numbers give further examples of plano-convex bracelets: 134, 565, 600.

“The following numbers contain nothing but indeterminate fragments: 116, 237, 244, 321, 384, 432, 459, 603, 644, 681, R. 18, F. 2, R. 45, F. 5, R. 54, F. 3, R. 82, F. 2, R. 99, F. 3 (incl. 2 fragments of faience), R. 117, F. 2.

“None of this glass need be earlier than the 4th century A.D., and apart from one or two pieces, which may be quite modern, it all seems to fall between the 4th and 13th centuries, A.D. The bulk is Byzantine or Early Arabic.”

A rough analysis of this report shows that the majority of the fragments may be attributed to the late Roman or Byzantine period. Nine pieces are attributed to the Early Arabic period and only two (and these doubtfully) to the Middle Arabic period (10th–13th centuries.)

These samples of glass, except the indeterminate fragments (which have been discarded), have been deposited in the Ashmolean Museum.

CURRENCY

The excavations at Abu Geili yielded four coins as follows:

- O.C. 190 (now lost) was a copper coin, one side of which was inscribed and legible, and the other side of which is described on the card as “illegible”. It was found in the siftings from square 3, and the object-card is dated 14.2.14. Its discovery is mentioned in the Diary (p. 26) under

that date. On the card I drew as well as I could the legible inscription, and this card was submitted to the Department of Coins in the British Museum. In his reply of 23.1.47 Mr. J. Walker, Assistant Keeper, states that the drawing shows it to be “certainly Turkish, and might well be 10th century (A.H.)”. It was of exactly the same size as O.C. 240.

- O.C. 240 (now in Khartoum) is a silver coin stated by Mr. Walker to be of the Turkish Sultan Murad III (A.D. 1574–1595); the date is off the flan. It was minted in Egypt, weighs 12.2 grains (0.79 gramme); the diameter is 0.6 in. It was found in square 3, and the object-card is dated 18.2.14.
- O.C. 544 (also in Khartoum) is a bronze coin (5 paras) of the Turkish Sultan Abd-al-Majid, dated A.H. 1255 with regnal year 5, equivalent to A.D. 1844. It was minted for Egypt, weighs 91.2 grains (25.91 grammes), and the diameter is 0.85 in. It was found in square 18 (i.e. square GA, 3–4, surface to about 1 m.) and the object-card is dated 27.3.14.
- O.C. 673 (also in Khartoum) was not submitted to Mr. Walker but is a coin of exactly the same kind as O.C. 544. No information concerning it is available except that it comes from the “siftings of 401”—401 being one of the outlying sites described in Chap. VII.

None of these objects has an exact provenance but, in view of the fact that one of the coins certainly (and another probably) belongs to the period to which I have assigned the graveyard, it would seem useful to collect here, for the convenience of future workers, the remarks made by some of the early travellers on the currency of the Fung Kingdom.

Poncet, who was in the town of Sennar early in 1699, says¹ (p. 25):

“The smallest piece of money of that Kingdom is of the value of a French *double*. ’Tis a little bit of iron of the figure of St. Antony’s cross.² The fadda comes from Turkey, and is a small silver piece less than a *denier*; it’s worth a penny. Besides these two sorts of coin, they only make use of Spanish *reals* and *piastres*, which are to be round, for the square ones are not current in trade. A *piastre* is about the value of four *livers* in that country.”

Krump, who was in Sennar for a year 1701–2, says³ (pp. 288–289):

“In the whole of Turkey no silver currency is more current than the *peze d’otto di Spania*, and in gold the Venetian sequin; on the other hand in Grand Cairo and in the whole of Egypt there are current also the Imperial thaler, gulden and ducats. In Egypt there are also met with other coins which are smaller than the thaler and are called Abukhelb, in which the image of a dog is stamped, from which the name is derived. They are worth some 20 Kreutzer, less than one *peze d’otto*. In the whole of the Kingdom of Nubia there is little or no coinage found except amongst the merchants who trade with Grand Cairo; they are, however, now beginning to accept the *peze d’otto*. In the Kingdom of the Fungi are the *pezi d’otto* likewise the best coins, but they must be big and broad. . . . This Kingdom [of the Fungi?] has also a silver coin a little bigger than our [German or Bavarian] Kreutzer and smaller than the medine in Egypt; it is made of the best silver and 45, 50, 55, according to size, are equivalent to a *peze d’otto* ‘oder specie Reichsthlr’. But a *peze d’otto* is sometimes used in trade as equivalent to 60 of the small silver coins.

“Besides this they have also another currency of iron, each unit of which is formed of this size [Fig. 174] ‘und gelten solche 12, 16, 20 darnach sie auf- oder abschlagen eine kleine silberne Münz’.”⁵

¹ *A Voyage to Æthiopia*, London, 1709, 25. (The original manuscript, in French, is in the library of the University of Montpellier.)

² Also called, from its resemblance to the Greek letter, the Tau cross. This description relates the shape to that of the units described by Krump and Ruppell, mentioned below.

³ *Höher und fruchtbarer Palm-baum*, etc., Augsburg, 1710, 288–289. (There is a copy of this very rare book in the British Museum, reference No. 1369 d 26. I have translated freely from the German.)

⁴ The outline here given is traced from a slightly reduced photostat.

⁵ Mrs. Bersu, who has kindly helped me with the translation of this whole passage, comments as follows on the portion here left untranslated: “This sentence is obscure in German and I am unable to translate it. The writer probably meant that the iron coins are worth 12, 16, or 20 of the small silver coins, according to the size of the iron pieces.”

"Anyone who likes may make his own currency, and he may make it large or small, thick or thin, narrow or wide, long or short. There came with us to Sennar a Greek named Schechin who was a sword-maker [Klingenschmied] by profession. When he had nothing else to do he changed [or obtained by exchange?] such iron currency and made two small units out of one big one, which was profitable for him.

"In [the town of] Sennar and in this Kingdom there is no minted gold coinage, but the best Arabian gold, traded in ounces, is found here. The ounce, which is equivalent in weight to four Spanish doubloons, is worth, or costs, 9 to 10 pezi d'otto."

Krump then describes a currency called in Arabic *tubthamur*, consisting of a "24 Armb langen und 2 Spann breiten" piece of cotton cloth, which is used in the Kingdoms of the Fungi and of Nubia and indeed in the whole of Africa among the Moors.¹ He then passes on to "Aethiopia", by which he means Abyssinia, and mentions the gold currency (not coinage) there, civet, and the lumps of salt currency, giving their equivalents in gold. All this, of great intrinsic interest, does not concern us here.

MacMichael² mentions this iron currency. "The chief of the Ghodiat confederacy between El Obeid and Daier was given the title of Mangil, and was expected to pay a yearly tribute of cattle and iron hoes, called Hashhash um Henana."

Ruppell³ also describes an iron currency of units 3 in. in size (*drei Zoll große Stücke Eisen*) and illustrates them diagrammatically, showing that the shape resembled Krump's drawing.

El Tunisi⁴ also records their use in Darfur in the early nineteenth century.

Burckhardt⁵ states that "the common currency of Kordofan, besides Dhourra, is said to be small pieces of iron" which "are collected and worked into axes and spearheads". This recalls the iron currency-bars of England in the Iron Age, mentioned by Caesar, which resemble swords in the rough and may have been worked up into such.

During the excavations many shapeless fragments of iron were found and duly recorded, often queried as being perhaps pieces of axes. It is not unlikely that some of these had been parts of currency-units like those described above, which we know from documentary evidence to have been so used.

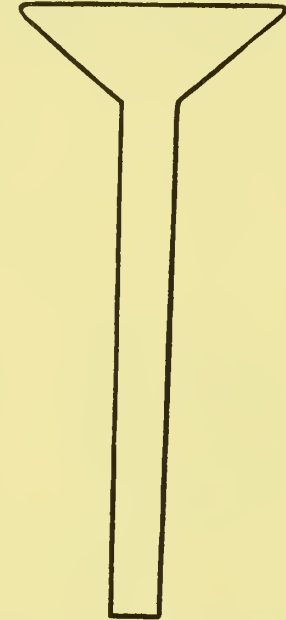


FIG. 17. Iron currency-unit

PIPES (AND SMOKING)

During the excavation of the main site several ornamented clay bowls of pipes were found.

No complete and undamaged specimen was recovered, but, although the pipes vary in detail and decoration, it is clear that they all had the same general shape, which, in section, is shown in Fig. 18. It will be seen that the mouthpiece—or the socket to hold the stem—is inclined to the

¹ For this cloth currency in Kanem and Darfur, see Arkell in *Sudan Notes and Records*, vol. XXVII, 1946, pp. 88–89.

² *A History of the Arabs in the Sudan*, 1922, vol. I, p. 205; *Tribes of Northern Kordofan*, p. 67.

³ *Reise in Nubien, Kordofan, etc.*, Frankfurt, 1829, p. 139.

⁴ *Voyage au Darfour*, translated by Perron, Paris, 1851, p. 320.

⁵ *Travels*, 1819, p. 319.

bowl at an acute angle, and no exceptions to this rule occurred. The actual stem was probably a long hollow reed, which was tightly wedged into the socket.

Some of the bowls are shown in Pl. LX A and one of unusual shape at No. 1 in Pl. LX B; stem-holders are illustrated at Nos. 2-6 in Pl. LX B. Details of ware and provenance are given in the Description of Plates. The bowls were sometimes decorated with an incised design, but it is apparent that, if an ornamental pipe were required, the pipemaker lavished his art on the stem-holder rather than the bowl. Fragments of such holders with square ends are Nos. 4 and 5 in

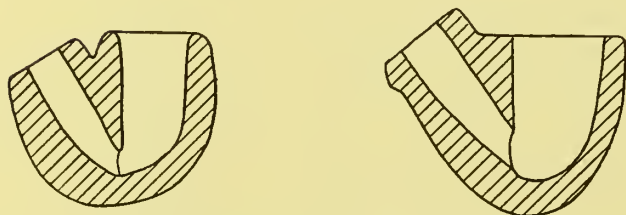


FIG. 18. Sections of tobacco pipes. 1:2

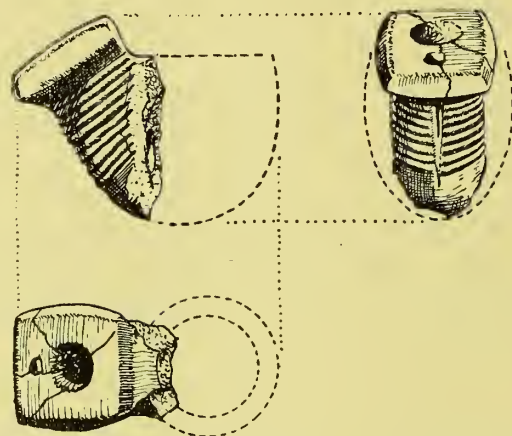


FIG. 19. Stem-holder of pipe, O.C. 458. 1:2

Pl. LX B. An even more ornate example, of black ware, is shown in the drawing Fig. 19. This is O.C. 458 and was found in square 5.

Unfortunately, not one of the pipes was found with any provenance that would enable it to be dated. Certain negative facts, however, can be stated with confidence: no pipe-bowl was found below the floor of any of the houses, nor in any grave, nor in the stratum below the Fung surface covering the graveyard. There is therefore strong presumptive evidence that they are of late date. That of course agrees with the known facts about the history of smoking, which was first introduced into Europe in 1559. The spread of a new habit is often very rapid, and there is good reason to suppose that it may have reached Sennar not many years later. The *Tabaqat* describes a debate held at Rufa'a between Sheikh Idris and Sharif Abd al Wahhab, in the presence of Agib el Mangilak, who ruled between about 1570 and 1611. Sheikh Idris defended the practice of smoking, which, though an innovation, must have been introduced some years before, because during the debate it was said of Qadi Dushayn (appointed by Agib) that he smoked to the date of his death. The question was considered to be of sufficient importance to be referred to the religious authorities in Cairo, where it had already been the subject of discussion. According to Hillelson,¹ the Rufa'a debate may, therefore, well be historical. The date is uncertain, but must be after 1570, perhaps not long after. The pipe-bowls may quite well, therefore, belong to the early Fung period and be contemporary with the early graves; and that was the opinion I formed at the time of the excavations.

¹ *Sudan Notes and Records*, vol. VI, pp. 202-203.

Burckhardt¹ says that, in his time, the best tobacco came to Shendy from Sennar and was called "Taba". "Pipes and pipe-heads of clay are also imported from Sennar." Tobacco was also exported from Sennar to the Yemen by merchants of Suakin.² Hoskins³ says that tobacco and pipes were brought to Berber (Makkarif) by Sennar and Shendy merchants. Tobacco is still grown in the Sennar district.

Ornamented clay pipe-bowls, resembling those found at Abu Geili, are still made in the sudd region and south of it, or were so made during the nineteenth and early twentieth centuries. The

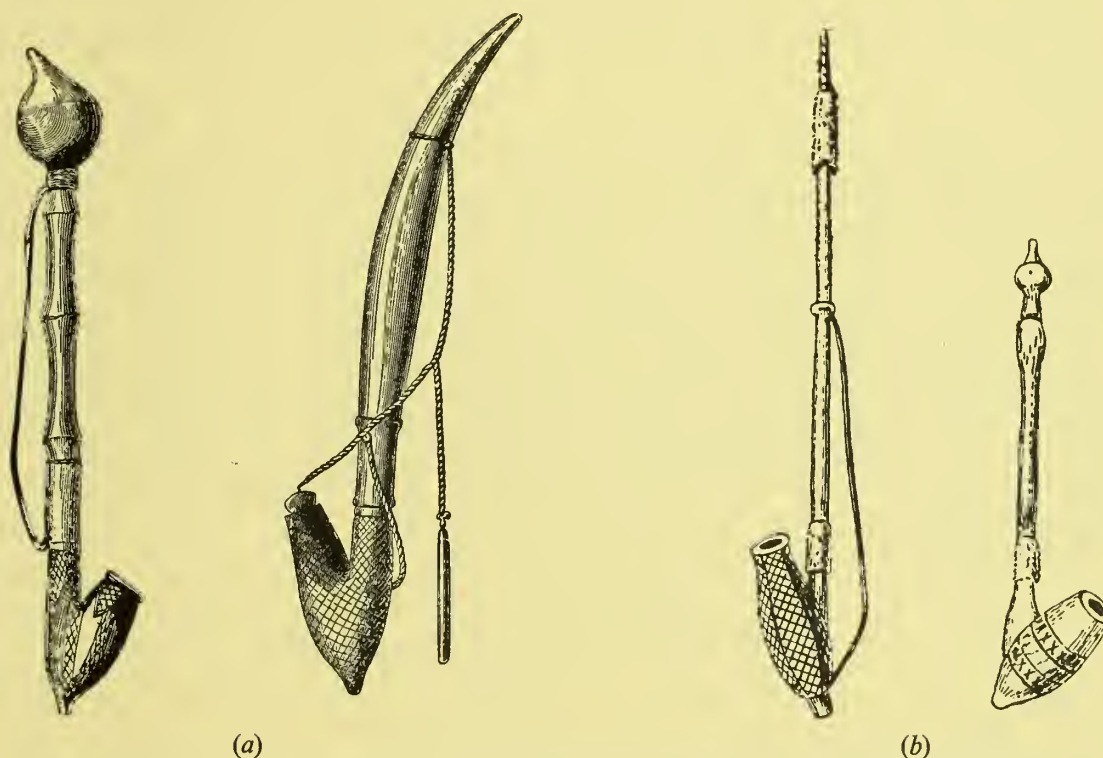


FIG. 20. Nuer tobacco pipes: (a) after Petherick; (b) after Petermann's *Ergänzungsheft*

closest parallels, so far as one can judge from illustrations⁴ (reproduced here, Fig. 20, *a* and *b*), are those of the Nuer, where the bowl is set at an acute angle to the part into which the stem is inserted. The Niam-niam pipes were of quite a different type, consisting of short, stumpy, wide-mouthed clay bowls inserted in short, wide stems round which, near the mouthpiece, is an ornamental clay ball exactly like a spindle-whorl and similarly ornamented. The stem, however, is thick, and must have necessitated a *large* hole through the middle of the ball, so that it could never be mistaken for a spindle-whorl.⁵

¹ *Travels*, 1819, p. 292 (1820, 260).

² *Id.*, *ibid.*, p. 321. See also Cailliaud, *Voyage à Meroé*, vol. II, pp. 282-283.

³ *Travels in Ethiopia*, 1835, p. 61.

⁴ Petherick, *Travels in Central Africa*, 1869, vol. I, p. 119; Pruyssenaere, *Explorations in the Blue and White Nile regions*;

Petermann's *Ergänzungsheft* No. 51 (Part 2, 1877, frontispiece, Figs. 6 and 7). In the reproductions of illustrations in Fig. 20 the pipes have been separated from the other objects with which they were originally drawn.

⁵ Schweinfurth, *Heart of Africa*, 1873, vol. II, p. 14.

The Azande

"tobacco pipes vary from the big kind three feet in length . . . to the more portable one a third of this size. The bowls are well made, of pottery, pleasingly shaped and sometimes, though rarely, modelled to represent a head,¹ measuring from three inches to an inch in diameter across the top. The stem is of hollowed wood, the joint between it and the bowl being sometimes lapped with leather. The mouthpiece is the stone of the *akua* palm fruit (Ar. *dōm*) from which the kernel has been removed and replaced by a mass of fibre obtained by scraping the stalk of a plant. . . . It seems a curious coincidence that in three or four of the aboriginal tongues of the southern Bahr el Ghazal the word for tobacco should be *taba*; in Zande it is *gbakara* or *bagduduma*."

There follows an account of the method of smoking by taking a deep inhalation and then expelling it in a great cloud.²

The history of smoking in Africa is a subject which should be closely investigated. These clay pipe-bowls are destined to become valuable type-fossils when the ancient sites of Africa are methodically excavated; they have all the requisites of such, being indestructible, variable, and of a convenient size. But they have also one characteristic of supreme value—they must all belong to a known period that cannot be earlier than the introduction of smoking—which seems, as already shown, to have taken place in the Blue Nile region during the second half of the sixteenth century. When one of the numerous Shilluk *debbas* (or habitation-mounds) on the White Nile is excavated, it is certain that pipe-bowls³ will be found, and the stratum in which they first appear will be known thereby not to antedate the second half of the sixteenth century. On this evidence alone it will therefore be possible to build up a series of pottery-types and sequences that will form a secure basis for the archaeology of the region. The excavation of such a mound is a crying need at the present moment.

DESCRIPTION OF PLATES

PLATE LI. Stone objects

A. Celts, armlets, pick. [To Khartoum except where otherwise indicated]

1. Celt, diorite, reused as a pounder. O.C. 425, from square 14.
2. Celt, dark grey stone, reused as a pounder. O.C. 691, from square 20.
3. Celt, diorite, from foot of cliff.
4. Fragment of knobbed armlet, green crystalline stone. O.C. 69, from square 2.
5. Celt, dark grey crystalline stone, reused as a pounder. O.C. 309, from foot of cliff. [Institute of Archaeology]
6. Celt, greenish-grey crystalline stone, reused as a pounder. O.C. 110, from square 2. [Institute of Archaeology]
7. Fragment of bracelet, type VI. l. 1. Dark grey crystalline stone. O.C. 93, from square 1.
8. Fragment of armlet, type VI. m. 1. Dark grey schist with white streaks, from R. 27, F. 4.
9. Fragment of pick, porphyry, grey-green ground-mass with large pink feldspar phenocrysts. O.C. 595, from R. 21, F. 4. (Cf. *Jebel Moya*, Pl. LXXI A 7, 8, 13.) [Institute of Archaeology.]
10. Fragment of armlet, type VI. h. 1. Diorite. O.C. 554, from square 3.
11. Fragment of armlet, type VI. s. 1. Fine grey crystalline stone, from R. 11, F. 4.
12. Fragment of armlet, type VI. m. 1. Coarse sandstone, from R. 101, F. 2.
13. Fragment of armlet, type VI. k. 1. Red-brown sandstone. O.C. 85, from face of cliff.

¹ Compare O.C. 477.

² *Sudan Notes and Records*, vol. X, 1927, pp. 92–93, Pl. 6.

³ For Shilluk pipes, see Russegger, *Reisen*, vol. II, part 2, p. 64 (near El Ais, about 1837).

B. Pounders and rubbers. [All to Khartoum]

1. Rubber, coarse brown sandstone. O.C. 348, from square 7, 1.30 m. b. s.
2. Finely finished bun-shaped rubber, porphyry as No. 9 above. Provenance unknown.
3. Roughly cubical rubber, edges worn by pounding, dark green granite. O.C. 538, from square 8.
4. Sub-spherical pounder, diorite, stained with red pigment. From R. 54, F. 3.
5. Whetstone, fine grey-green schist. O.C. 594, from square 22.
6. Partly finished archer's loose (?), same material as 4. O.C. 563, from square 13.
7. Pestle or roller, grey-white mottled stone. O.C. 562, from square 12.
8. Hammer stone, same material as 7. O.C. 238, from surface.
9. Rubber or whetstone, fine grey-green schist. O.C. 601, from square 5.

PLATE LII

A. Archers' looses.

1. Hard, yellow-white stone with iron stained zone, complete. Provenance unknown. [Oxford]
2. Grey granite, complete. O.C. 535, from square 5. [Khartoum]
3. Mudstone, purple and buff, complete. O.C. 446, from square 12. [Khartoum]
4. Grey granite, complete. O.C. 527, from R. 9, F. 1. [Institute of Archaeology]
5. Grey granite, complete. Provenance unknown. [British Museum]
6. Mudstone, soft, grey-brown mottled, broken. O.C. 276, from square 3. [British Museum]
7. Red granite. Two fitting fragments, one from the foot of the cliff and the other from R. 83, F. 5. [Khartoum]
8. Mudstone, soft, reddish-purple, broken. O.C. 604, from square 7. [Khartoum]
9. Grey granite, broken. O.C. 276, from square 3. [British Museum]
10. Mudstone, soft, reddish-buff, broken. O.C. 601, from square 5. [Peabody]
11. Grey granite, broken. O.C. 638, from square 15. [Oxford]
12. Mudstone, soft, buff and purple mottled, broken. O.C. 276, from square 3. [British Museum]
13. Mudstone, brownish-grey. O.C. 358, from square 7. [Khartoum]
14. Mudstone, soft, buff with red-purple veins. O.C. 550, from square 1. [Khartoum]
15. Grey sandstone. O.C. 689, from square 14. [Oxford]
16. Grey granite, broken. From R. 45, F. 4. [Peabody]
17. Diorite, broken. O.C. 558, from square 8. [Oxford]

B. Pottery disks and rings.

1. O.C. 326, from square 5. [Khartoum]
2. O.C. 564, from square 13. [Khartoum]
3. O.C. 562, from square 12. [Peabody]
4. O.C. 564, from square 13. [Khartoum]
5. From R. 63, F. 2. [Peabody]
6. From R. 112, F. 3. [Khartoum]
7. O.C. 237, from square 1. [Institute of Archaeology]
8. O.C. 566, from square 15. [Oxford]
9. O.C. 565, from square 14. [British Museum]
10. Fragment of ring. O.C. 550, from square 1. [Khartoum]
11. Fragment of ring. O.C. 562, from square 12. [Peabody]
12. From R. 27, F. 4. [Institute of Archaeology]
13. Fragment of bracelet. O.C. 550, from square 1. [Khartoum]
14. O.C. 554, from square 3. [British Museum]
15. Fragment of bracelet, from R. 15, F. 3. [British Museum]
16. Fragment of bracelet, from R. 34, F. 2. [Oxford]

PLATE LIII. Iron objects

A. Arrow-heads.

1. From R. 101, F. 3. [Oxford]
2. From R. 112, F. ? [Institute of Archaeology]
3. O.C. 119, from square 1. [Institute of Archaeology]
4. O.C. 633, from square 17. [Khartoum]
5. O.C. 597, from square 22. This is probably either a dagger or a spear-head. [Oxford]
6. O.C. 622, from square 20. [Khartoum]
7. From R. 93, F. 2. [Khartoum]
8. From R. 27, F. 5. [Oxford]
9. O.C. 292, from square 4. [Peabody]
10. From R. 112, F. 3. [Khartoum]
11. O.C. 570, from square 22. [Oxford]
12. O.C. 18, from square 1. [Khartoum]
13. From R. 38, F. 5. [Peabody]
14. From R. 45, F. 2. [Khartoum]
15. From R. 59, F. 2. [Oxford]

B. Miscellaneous objects of iron.

1. Kohl-stick. O.C. 392, from square 2. [Khartoum]
2. Scroll-headed pin. O.C. 367, from square 6. [Oxford]
3. Chisel (?), from R. 104, F. 4. [Oxford]
4. Tweezers, from R. 117, F. 2. [Khartoum]
5. Chisel. O.C. 185, from square 3. [Khartoum]
6. Knife blade with tang. O.C. 412, from square 6. [Khartoum]
7. Scroll-headed implement, from R. 68, F. 3. [Khartoum]
8. Tweezers. O.C. 293, from square 4. [Oxford]
9. Scroll-headed implement. O.C. 622, from square 20. [Khartoum]
10. Unidentifiable implement. O.C. 294, from square 4. [Khartoum]
11. Unidentifiable implement. O.C. 291, from square 4. [Peabody]
12. Unidentifiable implement. O.C. 633, from square 17. [Khartoum]
13. Kohl-stick. O.C. 364, from square 7. [Khartoum]
14. Rings. Centre, O.C. 285 from square 4; remainder, O.C. 252 from square 5. [Khartoum]
15. Kohl-stick, from R. 104, F. 4. [Oxford]
16. Point. O.C. 598, from square 22. [Peabody]
17. Hooked implement. O.C. 341, from square 3. [Khartoum]
18. Hooked implement, from R. 9, F. 4. [Peabody]

PLATE LIV

A. Miscellaneous metal and other objects. [To Khartoum except where otherwise indicated]

1. Bone bead with incised decoration. O.C. 677, from square 13. [Oxford]
2. Bronze tubular bead, decorated. O.C. 677 as above. [Oxford]
3. Bone bead with incised decoration. O.C. 679, from square 10.
4. Bronze frog, provenance uncertain.
5. Bronze tubular beads. O.C. 906, from square 16.
6. Bronze bell, complete. O.C. 204, from floor of a room in southern part of square 3.
7. Fragment of bronze bell. O.C. 287, from square 4.
8. Copper ornamental arrow-head (?) or bodkin (?). O.C. 408. [Institute of Archaeology]
9. Fragment of bronze bell. O.C. 302, from square 4. [Oxford]

10. Fragment of bronze bell with embossed decoration. O.C. 302, as above [Oxford]
11. Pewter ring, cast pattern. O.C. 415, from square 6.
12. Bronze bezel ring, broken, no device. O.C. 685, from square 12.
13. Bronze ear-ring. O.C. 122, from square 1. [Oxford]
14. Silver ear-ring. O.C. 289, from square 4.
15. Quatrefoil bead, white milk quartz. From R. 97, F. 2.
16. Bronze ring. O.C. 911, from R. 30, F. 4.

B. Lip-studs, ear-studs, etc.

Top line: Decorated pottery studs, incised. [To Khartoum except where otherwise indicated]

1. Black, white-filled. O.C. 328, from square 3. [Peabody]
2. Black, white-filled. O.C. 689, from square 14. [Peabody]
3. Black. O.C. 603, from square 4. [Institute of Archaeology]
4. Black. O.C. 640, from square 18. [Oxford]
5. Black. O.C. 603, from square 4.
6. Black. O.C. 171, from square 2. [Institute of Archaeology]
7. Black. O.C. 338, from square 3.
8. Black. Provenance unknown. [Oxford]
9. Light brown. O.C. 459 from square 5.

Second line: Undecorated studs (except No. 13).

10. Black. O.C. 451, from square 15. [Peabody]
11. Black. O.C. 906, from square 16. [Oxford]
12. Black. O.C. 679, from square 10.
13. Ivory pin, burnt at the butt end and broken. Decorated with rows of drilled holes. O.C. 463, from the foot of the cliff.
14. Red-buff. O.C. 906, from square 16. [Oxford]
15.)
16.) Black. O.C. 338, from square 3.
17.)

Third line: Stone studs.

18. Natrolite (fragment). O.C. 170, from square 2. [Institute of Archaeology]
19. Quartz (fragment). O.C. 347, from square 3.
20. Quartz (3 studs). O.C. 673, from siftings at Site 401.
21. Rough quartz. O.C. 676, from square 8.
22. Rough quartz. O.C. 554, from square 3.
23. Fine-grained red stone. O.C. 394, from square 2. [Institute of Archaeology]
24. Natrolite. O.C. 28, from square 1.
25. Natrolite. O.C. 900, from square 12.

Lowest two lines: Ornaments of *Aspatharia* shell.

- 26, 27. O.C. 699, from square 17. [Peabody]
- 28-30. O.C. 908, from square 6.
- 31, 32. O.C. 639, from square 17.
- 33 and 34-36. O.C. 604, from square 7.
37. O.C. 908, from square 6. [Oxford]
38. O.C. 556, from square 5. [Institute of Archaeology]
39. O.C. 322, from square 3. [Oxford]

PLATE LV

A. Clay figurines.

1. O.C. 467, from foot of cliff. [Khartoum]
2. From R. 86, F. 3. [Khartoum]
3. O.C. 689, from square 14. [British Museum]
4. O.C. 699, from square 17. [Oxford]
5. O.C. 376, from foot of cliff. [Institute of Archaeology]
6. O.C. 699, from square 17. [Oxford]
7. O.C. 328, from square 3. [Peabody]
8. O.C. 565, from square 14. [British Museum]
9. O.C. 260, from foot of cliff. [Khartoum]
10. O.C. 273, from square 5. [Khartoum]
11. O.C. 463, from foot of cliff. [British Museum]
12. O.C. 435, from square 5. [Khartoum]
13. O.C. 7, from square 1. [British Museum]

B. Photograph, taken in 1914, of a woman from Abu Geili village spinning cotton.

PLATE LVI

A. Spindle-whorls with incised designs. [All to Khartoum]

1. White-filled. From R. 33, F. 2.
2. Traces of white filling. From R. 87, F. 2.
3. White-filled. From R. 59, F. 4.
4. White-filled. O.C. 321, from square 3. *See also* Pl. LVII 11.
5. White-filled. From R. 54, F. 3.
6. White-filled. From R. 28, F. 5.
7. No filling. From R. 77, F. 3.
8. Traces of white filling. From R. 45, F. 6.
9. Traces of white filling. From R. 101, F. 3.
10. No filling. From R. 54, F. 3.
11. White-filled. From R. 53, F. 3.
12. Traces of white filling. From R. 82, F. 3. *See also* Pl. LVII 10.
13. White-filled. From R. 18, F. 3.
14. White-filled. From R. 35, F. 3. *See also* Pl. LVII 48.
15. Traces of white filling. O.C. 556, from square 5.
16. Birds alternately red-filled and white-filled. O.C. 377, from foot of cliff.
17. Traces of white filling. O.C. 143, from square 1.
18. White-filled. O.C. 243, from square 5.

B. Spindle-whorls with stamp impressions. [All to Khartoum]

1. Traces of white filling. O.C. 560, from square 10.
2. Traces of white filling in stamp impressions, red filling in radial lines. From R. 60, F. 3.
3. Traces of white filling. From R. 95, F. 3.
4. Filling as in 2. O.C. 601, from square 5.
5. Alternate circles and stamp impressions; traces of red filling. O.C. 143, from square 1.
6. No filling remaining. From R. 44, F. 3.
7. Traces of white filling. Provenance unknown.
8. Circles white-filled, lines red-filled. From R. 8, F. 5.
9. Filling as in 8. From R. 35, F. 4. *See also* Pl. LVII 5.

10. White-filled. From R. 38, F. 2.
11. Concentric circles, outer red-filled, inner white-filled. From R. 57, F. 5. *See also* Pl. LVII 32.
12. Filling as in 8 and 9. From R. 71, F. 4.
13. No filling left. O.C. 560, from square 10.
14. White-filled. From R. 66, F. 4.
15. Traces of white filling. From R. 66, F. 2.
16. Traces of white filling. From R. 25, F. 2.
17. Traces of white filling. From R. 54, F. 3.
18. White-filled. O.C. 143, from square 1.

PLATE LVII. Spindle-whorl sections

1. Pattern four times repeated. O.C. 607, from above the highest floors in square 12.
2. Impressed dots in two opposite quadrants. O.C. 560, from square 10.
3. Four quadrants. R. 75, F. 2.
4. White-filled. From R. 43, F. 3.
5. From R. 35, F. 4. *See* photograph, Pl. LVI B 9.
6. White-filled. From R. 95, F. 3.
7. Four times repeated. O.C. 567, from square 15.
8. Four times repeated. From R. 97, F. 3.
9. Four times repeated. From R. 98, F. 4.
10. White-filled. From R. 82, F. 3. *See* photograph, Pl. LVI A, 12.
11. White-filled. O.C. 321, from square 3. *See* photograph, Pl. LVI A 4.
12. Impressed, white-filled. From R. 30, F. 4.
13. Five times repeated, alternately red and white. O.C. 606, from square 11.
14. Roughly incised. Pattern repeated on opposite side. O.C. 600, from square 6.
15. Eight stamp-impressions, white-filled. Radial lines red. O.C. 561, from square 11.
16. Incised, white-filled. From R. 20, F. 4.
17. Undecorated. O.C. 320, from square 2.
18. Five times repeated. From R. 44, F. 3.
19. Five times repeated. Traces of red filling. O.C. 436, from a depth of about 1.00 metre in square 5.
20. Four times repeated. Traces of white filling. From R. 30, F. 4.
21. Twelve stamped circles and radial lines, white-filled. From R. 68, F. 3.
22. Incised, no filling remaining. From R. 105, F. 2.
23. Five times repeated, incised, white-filled. O.C. 561, from square 11.
24. Six radial incisions. From R. 63, F. 2.
25. Impressed, white-filled. O.C. 639, from square 17.
26. Sixteen impressed radial lines; trace of white filling. From R. 24, F. 2.
27. Deeply incised, white-filled. O.C. 551, from square 2.
28. Deeply incised, white-filled. From R. 66, F. 4.
29. Incised, white-filled. From R. 38, F. 5.
30. Horizontals white-filled, alternate verticals red. From R. 65, F. 4.
31. Deeply impressed, no filling left. O.C. 144, from the face of the cliff.
32. Impressed concentric circles; outer red-filled, inner white-filled. From R. 57, F. 5. *See* photograph, Pl. LVI B 11.
33. Repeated three times, incised and white-filled. O.C. 563, from square 13.
34. Impressed, no filling. O.C. 550, from square 1.
35. Incised, no filling. O.C. 456 from square 5. *Cf.* Pl. LIX, 8.
36. Roughly-incised line, otherwise undecorated. From R. 12, F. 2.
37. Repeated five times, white-filled. Provenance unknown.
38. Undecorated. From R. 8, F. 5.
39. Stamped. Trace of white filling. From R. 35, F. 4.

40. Eight stamps, white. Dividing lines red. From R. 30, F. 4.
41. Scratched after firing. Repeated once opposite. O.C. 600, from square 6.
- *42. Incised. O.C. 92, surface to 0.50 metre in square 2.
- *43. Undecorated. O.C. 603, from square 4.
- *44. Undecorated. O.C. 607, from above the highest floors in square 12.
- *45. Four incised hatched triangles. O.C. 551, from square 2.
- *46. Fragmentary. Eight stamps white-filled, radial lines red. O.C. 605, square 8.
- *47. Undecorated, from R. 101, F. 4.
- *48. Incised and white-filled. From R. 35, F. 3. *See* photograph, Pl. LVI A 14.

PLATE LVIII. Spindle-whorls, incised designs

1. Red-filled. From R. 44, F. 3.
2. Red-filled. From R. 83, F. 3.
3. Incised, white-filled. O.C. 566, from square 15.
4. Trace of white filling. O.C. 558, from square 8.
5. No filling. O.C. 563, from square 13.
6. White-filled. From R. 87, F. 2.
7. Red- and white-filled. From R. 36, F. 2.
8. Red lines, white-filled stab-marks made with a fine reed or grain-stalk. From R. 15, F. 4.
9. White-filled. From R. 30, F. 3.
10. Red-filled. From R. 66, F. 2.
11. White-filled. O.C. 321, from square 3.
12. From R. 57, F. 3.
13. From R. 63, F. 2.
14. White-filled. From R. 55, F. 4.
15. Red- and white-filled. O.C. 606, from square 11.
16. White-filled. From the foot of the cliff.
17. Concentric circles red-filled, zigzags white-filled. From R. 30, F. 4.
18. Concentric circles white, horizontals red, verticals white. From R. 38, F. 5.
19. Three-colour filling—white, red, yellow. From R. 35, F. 2.
20. No filling. O.C. 562, from square 12.
21. White-filled. O.C. 567, from square 15.
22. White-filled. O.C. 551, from square 2.
23. Red- and white-filled. From R. 42, F. 2.
24. Incised, white-filled. From R. 58, F. 3.
25. White-filled. From R. 40, F. 2.
26. White-filled. O.C. 551, from square 2.
27. White-filled. From R. 42, F. 3.
28. Dots impressed with grass-stem or small reed, white-filled. From R. 72, F. 4.
29. White-filled. O.C. 321, from square 3.
30. Trace of white filling. O.C. 601, from square 5.
31. White-filled. From R. 98, F. 4.
32. White-filled. From R. 108, F. 2.

PLATE LIX. Spindle-whorls, developments of incised designs and stamp-impressions

Developments:

1. Birds, alternately yellow- and white-filled. O.C. 554, from square 3.
2. Birds, alternately yellow- and white-filled. O.C. 245, from square 3.

* Represented by single specimens only.

3. Birds, yellow-filled. Eyes white-filled. From R. 83, F. 5.
4. White-filled. O.C. 144, from face of cliff.
5. White-filled. O.C. 551, from square 2.
6. No filling remaining. From R. 55, F. 2.
7. Roughly combed. From R. 36, F. 3.
8. No filling. O.C. 566, from square 15.
9. White-filled. O.C. 561, from square 11.
10. White-filled. O.C. 639, from square 17.
11. White-filled. From R. 45, F. 3.
12. No filling. From R. 5, F. 3.
13. Trace of white filling. From R. 45, F. 4.
14. Deeply incised, white-filled. From R. 98, F. 4.
15. Trace of white filling. O.C. 561, from square 11.
16. White-filled. From R. 23, F. 5.
17. Incised, white-filled. From R. 36, F. 2.
18. Red, white and yellow filling. O.C. 317, from square 3.
19. Incised, white-filled ("floral"). From R. 97, F. 3. *See Annals*, XI, Pl. XLV 8 and 13.
20. Devices alternately red- and white-filled. From R. 26, F. 3.
21. Pink filling. O.C. 564, from square 13.
22. White-filled. From R. 35, F. 3.
23. Deeply incised. Trace of white filling. From R. 104, F. 4.
24. No filling. From foot of cliff.
25. Trace of white filling. From R. 103, F. 3.
26. No trace of filling. From foot of cliff.
27. No filling. From R. 75, F. 3.

Stamp-impressions:

- | | |
|--|--------------------------|
| (a) R. 8, F. 5. | (n) R. 25, F. 2. |
| (b) R. 9, F. 6. | (o) R. 40, F. 2. |
| (c) R. 64, F. 3. | (p) O.C. 560, square 10. |
| (d) O.C. 560, square 10. | (q) R. 66, F. 2. |
| (e) O.C. 321, square 3. | (r) R. 66, F. 4. |
| (f) R. 95, F. 3. <i>See Annals</i> , vol. XI, Pl. LVIII 4. | (s) From foot of cliff. |
| (g) O.C. 144, face of cliff. | (t) R. 10, F. 6. |
| (h) O.C. 601, square 5. | (u) R. 118, F. 3. |
| (j) R. 60, F. 3. | (v) R. 73, F. 2. |
| (k) O.C. 320, square 2. | (w) Unknown. |
| (l) R. 40, F. 2. | (x) O.C. 551, square 2. |
| (m) R. 117, F. 2. | (y) R. 29, F. 3. |

PLATE LX. Pipes

A. Bowls, all blackened inside by use. [To Khartoum except where otherwise indicated]

1. Hard, smooth red ware; broken, showing section.
2. Discoloured red ware with traces of burnish. O.C. 458, from square 5.
3. Black-polished ware. O.C. 565, from square 14. [Peabody]
4. Reddish-buff ware with traces of black polish. O.C. 554, from square 3.
5. Fine, hard red ware with remains of red slip; fracture shows central streak of black. O.C. 163, from square 2.
6. Smooth, unpolished red ware. O.C. 566, from square 15.
7. Burnished buff ware. O.C. 554, from square 3.
8. Smooth, hard red ware, crudely finished. O.C. 319, from square 3.

B. All stem-holders except No. 1.

1. Hard, light red ware, discoloured by firing; smooth but unpolished; surface and fracture show glistening specks of mica; bowl blackened by use. O.C. 23, from surface of western side of eastern mound. [Khartoum]
2. Black ware with traces of polish. O.C. 600, from square 6. [Oxford]
3. Smooth, hard red ware, discoloured by firing. O.C. 566, from square 15. [Peabody]
4. Hard red ware. O.C. 318, from square 3. [British Museum]
5. Greyish-buff ware. O.C. 554, from square 3. [Khartoum]
6. Smooth red ware, blackened on one side by firing. O.C. 321, from square 3. [Peabody]

CHAPTER VII

OUTLYING SITES¹

(a) THE BRICK SITE NORTH-WEST OF ABU GEILI

NORTH-WEST of the modern village of Abu Geili, at a distance of 650 metres north-west of the second site (described below), were some red baked bricks lying in disorder on the surface, but evidently once forming a rectangular enclosure (Pl. LXI 1). Mr. Wellcome was particularly interested in bricks and rightly impressed upon me the importance of recording their exact dimensions. It is, therefore, disappointing to find that, although I took the trouble to send three of the bricks in a basket to Jebel Moya for Mr. Wellcome to see, the space of recording their dimensions is left blank in the diary (p. 17), where it is merely said that they are large and baked hard (Pl. LXI 2).

The site had, if I remember rightly, been pointed out to Mr. Wellcome by a local inhabitant. There is no mention of it in the diary until the 6th of February, when it is recorded (p. 17) that a grave had been found there the day before.

One grave, 401/1, was in a niche scooped out from the side of a circular pit, which had already been cleared out (Pl. LXI 3, and Fig. 21). This niche had been blocked by a wall, three bricks thick, consisting of eight (and once of more) courses of bricks of the same kind as those on the surface (Pl. LXI 4). The body was fragmentary, but there was no evidence of disturbance. At the head and feet and across the middle were placed three blocks of granite, nine in all, showing signs of having been artificially smoothed, but not shaped. They may have been broken querns; the fact that the body was that of an old woman agrees with this explanation. The body lay extended from west to east, the head (not present) being at the west end. The lower jaw was in position and perfect enough to show that nearly all the teeth had been lost during life. The body lay at a depth of 3.90 metres below the modern surface.

The sides of the pit showed marks of a change in the nature of the soil about half-way down (Fig. 21). The upper stratum, 1.60 metres thick, was softer than the lower and appeared to be an "artificial" accumulation, *i.e.* one in which one might expect to find potsherds (though there is no record of any such being found in it, or elsewhere on the site). It will be noted that potsherds *were* found down to a depth of 1.90 metres in the not very distant site No. 2 described below. There were distinct signs of the existence (at Site 1) of an old surface-level at 1.60 metres below surface, and below this the ground was much harder and more compact.

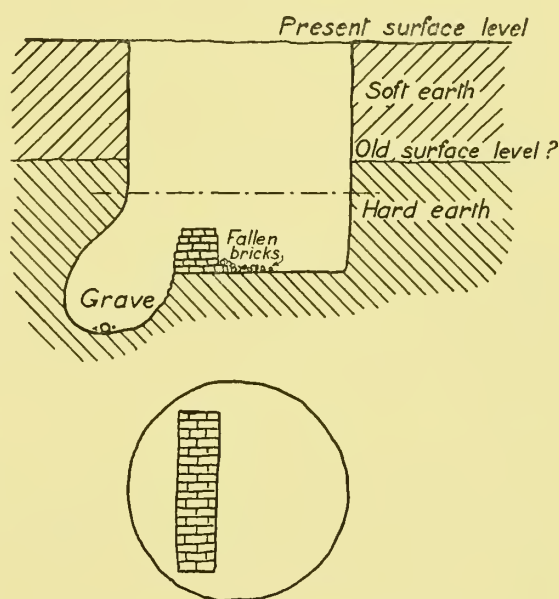


FIG. 21. Section of grave 401/1. 1:100

¹ The number 401 was given to both these sites.

The fallen bricks had evidently once formed the walls of a small square building; and the fact that most of them lay *within* the area enclosed suggests a brick dome that had collapsed, a *gubba* in fact. The orientation of the body, however, was not towards Mecca, but east and west, suggesting a Christian, rather than a Mohammedan interment. But is it not likely that the *gubba* has an ancient pedigree? Burial-customs are associated with regions rather than religions, and are very tenacious. The burial at Site 401, consisting of a shaft and walled recess, is essentially similar to an Old Kingdom Egyptian *mastaba*. The private tombs of the New Kingdom at Deir el Medina¹ are essentially *gubbas* with pyramidal domes, so to speak. Meroitic examples are illustrated in Liverpool *Annals*, vol. XI, parts 3 and 4, Pl. LXXI 3, 4, 7. The tradition of building such tombs may have lasted throughout the Christian period into the Mohammedan.

Graves of the same type as the four at these two outlying sites (401) were described by travellers in the middle of the nineteenth century, and are still in use in some parts of the Sudan. Lepsius,² on the authority of Osman Bey, Governor of Fazughli, who stopped the practice, describes how the people were buried alive there. "A pit was dug and, at the bottom of it, a horizontal passage; the body was laid in it, tightly wrapped in cloths, like that of a dead person." Some grave-goods were placed beside the person and the entrance was then filled up. It will be remembered that the body in 401/1 was that of a toothless old woman.

Mrs. Petherick³ describes two distinct burials in a precisely similar type of grave somewhere in the region of the Upper White Nile. One was for "the corporal", a member of their expedition. "The grave was four feet deep and a chamber formed at the bottom was covered with sand; here the body was to be placed. . . . Crude bricks were made of the clay surrounding and the small chamber being walled up, the soil was then thrown in and a high mound raised. . . ." Petherick describes the funeral of a Moro chieftain somewhere near or at Neangara on the River Ayi (about lat. 5° 40' N., long. 30° 10' E.):

"A slightly oval hole, 2' 2" long had been dug 5' deep, whence, horizontally from its southern side, a vault 4' wide by 4' 6" in length and 18" in height, was excavated. . . . The body was laid on the right side in a bent position, as if asleep, at the furthest extremity of the low vault. A ligament of bark was tied to the little finger of the left hand and the other extremity was drawn to the surface and there attached to a peg driven in the ground. The construction of a rough kind of basket-work occupied but a short time; and separating, as it did, the cavern at its entrance from the perpendicular hole, the earth thrown into the latter was excluded from the former."

In the shaft was planted a "massive tree-trunk" which carried and was decorated with a falcon's feather, worn on the head of the deceased during his lifetime. Around this was piled a mound of earth 3 ft. high covered with thorny branches.

Similar graves have been noted by writers in more recent times. A. C. Beaton,⁴ for instance, describes a special type of grave reserved for Bari rainmakers, as follows:

"Cut some 8 feet long, east to west, 3 feet 6 inches to 4 feet wide and some 6 feet deep at the deepest point, it descended from the west in two steps, the first parallel to the end, the second transverse, widening on the

¹ *The Pyramids of Egypt*, by I. E. S. Edwards, Pelican Books, 1947, Fig. 29.

² *Letters*, 1853, p. 222.

³ *Travels in Central Africa*, 1869, vol. I, pp. 161, 271-273. Like so many of the early travellers, she hardly ever says where she is,

and I cannot discover it from her narrative, which very rarely mentions a place-name.

⁴ *Bari Studies*, by A. C. Beaton, *Sudan Notes and Records*, vol. XV, pp. 85-88.

descender's right and bringing him half a turn to the left, facing the north-east corner, where, some 4 feet below the surface, the interment chamber proper was cut laterally and frontally into the north side and east end of the excavation. To this recess, some 6 feet long, 3 feet wide and 2 feet high, the corpse is consigned, recumbent in a native bed. . . . The corpse is on its right side with the head towards the door of the house, as he usually lies in this position during his lifetime watching his wife cook, and also so that his spirit, which must have a habitat, can find its way back into the house. If a woman, the corpse would lie on its left side. Large slabs of stone, thick stakes and sacking are used to block up the mouth of the cavity, so that no earth shall fall on him [the body]. Mud is plastered over these and the earth is then thrown in and stamped or beaten down."

A communal recessed grave is used by the Nuba (*i.e.* the Nuba proper of Southern Kordofan) and is described as follows by D. Hawkesworth:¹

"A shaft some four or five feet in depth is dug, and, horizontal to the base, a roomy chamber, capable of holding several corpses, is excavated. The entrance to this chamber is just large enough to enable one man to crawl through. The corpse is lowered into the grave feet first and is laid in the chamber lying on its right side like one asleep. The chamber entrance is then blocked up with an earthenware bowl, cemented up with mud, and the shaft is filled up with earth, forming a small mound over the grave."

Recessed graves, as mentioned on p. 19, are also used to-day in Dar Fung, and Evans-Pritchard,² describing a funeral he saw at Khor Jumjum, says:

"The grave was rectangular, almost square. It was dug down to the depth of three or four feet, and there a narrow recess was dug on the east side to a depth of some two feet. . . . When they [the funeral procession] reached the graveside, the bedstead was held over the grave while a man inside arranged the corpse wrapped in cloth. Over the inner grave he laid a row of stakes and plastered these over with clay. Then they filled in the grave and smoothed the heap with a spade. . . ."

The nature of the closing wall used to seal off the recess differs somewhat in the various graves described, but in all other essentials these graves closely resemble ours. It will be remembered that there was definite evidence of "recessing" in one of the graves in square 16. Some of the other graves there were dug, not vertically but at a slight angle, as if in obedience to some vague idea that the interment should be recessed. But the orientation of the bodies there was quite different, nor was there anywhere a trace of a mound or other superstructure.

The two cemeteries (for Site 401 is almost certainly such) are probably of different dates and religions.

No objects of any kind were found in the grave, except one spindle-whorl (O.C. 47) and the lumps of granite, nor is there any record of objects found during the removal of the earth filling the shaft.

(b) THE RECTANGULAR BUILDING IN THE MODERN VILLAGE OF ABU GEILI

While I was recuperating at Jebel Moya a site was dug, at the special request of Mr. Wellcome, in the village of Abu Geili 700 metres due north of the main site. Mr. Middleton was in charge.

The remains consisted of a rectangular building with walls of mud (not mud-brick), divided into two rooms of unequal size (Pl. LXII). The walls were built upon the modern surface, or only a few centimetres below it. There was nothing to indicate the date of the building, and it may

¹ *The Nuba Proper of Southern Kordofan*, by D. Hawkesworth, *Sudan Notes and Records*, vol. XV, p. 192.

² *Ethnological Observations in Dar Fung*, by E. E. Evans-Pritchard, *Sudan Notes and Records*, vol. XV, p. 23.

well have been quite recent, perhaps nineteenth century. Underneath it were found three graves with no grave-goods.

Grave 401/2 was found below the larger (south) room at the foot of a detached wall 1·60 metres long and made of three courses of red baked brick with two courses of mud between them. The body lay on the north side of the wall, the head to the west, at a depth of 1·50 metres below the modern surface. The burial was extended, the arms lying parallel with the body at its side, the hands on the head of the femur, not on the pubic region; the head lay on its side facing north. The body was that of an adult female.

Grave 401/3 was found on the 21st of April below the partition-wall separating the two rooms (Pl. LXII 4). On the south side of the grave were the remains of a wall, like that in the previous grave. (The tomb-card records the finding of the wall, but does not describe it; the photograph shows what look like bricks.) There were two bodies; one, undisturbed, consisting of the skeleton of an adult, lying in the same position as 401/2, at a depth of 1·25 metres below the modern surface. Beside it, on the north, were the confused bones of another body, evidently disturbed to make room for the first.

Grave 401/4 was found on the 21st of April immediately outside the north wall of the building. On the south side of the grave were the remains of a wall like the other two and not less than 1·00 metre long. At the west end of this wall were two bricks (of baked brick?), 0·5 metre and 0·7 metre thick, set on edge. There were two bodies; one, undisturbed, consisting of a skeleton lying on its right side in a slightly bent position. West of it lay the confused bones of another body, evidently disturbed to make room for the first. The bodies lay at a depth of 1·70 metres below the modern surface.

These three burials were certainly, I think, earlier than the building above and probably had no connection at all with it. They may have formed part of a graveyard whose other graves still remain below ground. The burials appear to have been made by first digging a vertical pit and then hollowing out a niche in its side at the bottom; this niche, or earthen burial chamber, was then blocked up with a wall. Traces of such a pit were, in fact, found¹ at the surface above 400/3 long before any burials had been found, or even suspected. The burials seem, therefore, to be of the same type as those from the brick site already described and have the same orientation. The fact that this orientation is an east-west one suggests that the burials are Christian rather than Mohammedan.

Of the objects found during the excavation, the only one that may belong to the house was a rough leaden disk about 5 cm. in diameter, "stamped and pecked" (O.C. 659). It was found inside the building 0·85 metre south of the north-east corner, at a depth of 0·35 metre below the modern surface, and is now in Khartoum. Potsherds were found in the soil beneath the building, at depths of 0·90 metre (O.C. 635), 1·40 metres (O.C. 634), and 1·90 metres (O.C. 636). All these were found in the earth above the graves. O.C. 634 includes rim-pieces with indentations, a type that may be Meroitic and is certainly ancient, and also some rim-pieces of granitic Jebel Moya ware. The presence of these sherds so deep in the soil could only be explained in the light of the general strata-history of the whole area, such as I had hoped to work out the following season. (*See also* description of Pit 5, p. 6.)

¹ Recorded on the diagram in Mr. Middleton's book of reports, p. 25, under the date 11th April 1914.

PART II

SITE 200 AT SAQADI

CHAPTER VIII

INTRODUCTION

It has been explained in an earlier volume¹ how the late Sir Henry Wellcome (then Mr. Wellcome), encouraged by his experiences at Jebel Moya during his first season's work in the Sudan, had projected an ambitious scheme of archaeological research which entailed the excavation of all the ancient sites in the Gezira. The sites selected for the inauguration of this programme were Saqadi² and Dar el Mek, and the supervision of the excavation of these sites was entrusted to Mr. Duncan Mackenzie. Mackenzie was later to be associated for many years with Sir Arthur Evans in Crete, and Sir Arthur himself has paid tribute to his qualities as an archaeologist.³ Joan Evans, in *Time and Chance*,⁴ gives a brief but vivid character sketch of him as a man—a sketch which possibly explains why he was chosen to excavate the isolated sites in question rather than to work at Jebel Moya itself in daily contact with Mr. Wellcome.

The site which is the subject of this report lies at the foot of Jebel Saqadi about 20 kilometres, roughly 12 miles, north-west of Jebel Moya. It was excavated in February 1913. The excavation brought to light a few courses of a rough stone wall enclosing an area about 25 by 20 metres, and within this, at a higher level, the remains of a later building in red brick. Associated with these were fragments of pottery and other small objects which were clearly debris of occupation.

It is a matter for regret that Mackenzie was not himself, in his lifetime, afforded an opportunity of writing up his work for publication, or was not at least allowed a breathing-space during which he could have summed up the results of his excavation. It is not that the existing records are inadequate; they are, on the contrary, detailed and ample. But a report on an excavation can always be better written at first hand by the excavator himself, with his memory of things seen to assist him, than by one who never saw that of which he writes and who bases his account on records alone. In the case of Saqadi these records comprise Mackenzie's diary, an object register in card-index form duplicated in book form, a plan and sections prepared by Middleton, and a series of photographs taken by Barrett.

The diary is unusually detailed because it was required to serve a dual purpose. Its duplicate pages were, in accordance with established routine, sent each week to Mr. Wellcome for his information and remarks; and, since he only occasionally visited the site himself, the diary had

¹ *Jebel Moya*, vol. I, p. 4.

² The accepted transliteration of this place-name at the time of excavation was "Segadi" and this spelling was used in the Jebel Moya report. The transliteration now officially adapted by the

Sudan Government is "Saqadi" and this will be used throughout this volume.

³ See the preface to the last volume of *The Palace of Minos* (1935).

⁴ p. 330.

perforce to include, for his satisfaction and enlightenment, a good deal of explanatory comment which would otherwise have been unnecessary. This comment, however, was chiefly concerned with the excavation, which Mr. Wellcome was inclined to judge quantitatively. (Did he not, after all, initiate his excavations in the Sudan primarily as a means of providing employment?) The finds were carefully described and recorded but without any comment other than factual, for the archaeologist is not justified in attempting to form conclusions before he has assembled all his evidence. It cannot be doubted that Mackenzie intended to offer his own interpretation of the results of his excavation but, unfortunately, he was transferred from Saqadi to Dar el Mek before he had time to do this. His diary finishes abruptly on the 28th day of the excavation and he was unable even to describe all the features of the red brick building which are shown on the plan, still less to attempt any reconstruction of its history.

As regards the building remains, it is to be noted that the excavation was filled in again as soon as work on the site was suspended, and nobody except those directly concerned ever saw the walls and brickwork which were laid bare. The present writer himself has seen only the low mound which once again marks the site, and cannot supplement the existing records with any contribution of his own from direct observation. It is only by sifting the relevant information from the diary and collating it with the photographs that he has been able to offer the account of the buildings which appears in Chapter XI. In the compiling of that chapter the lack of first-hand information was felt as an ever-present handicap, and the impossibility of consulting Mackenzie on obscure or puzzling questions a constant regret.

CHAPTER IX

EXCAVATION AND STRATIFICATION

THE EXCAVATION

THE site as it appeared before excavation began is shown in the photographs in Pl. LXIII. It lay a little to the west of the hamlet of Saqadi, and Mackenzie in his diary describes it as follows:

“The rugged granite mass of Jebel Segadi emerging precipitously from the plain forms the immediate background of the village while the site occupies the slightly rising narrow area of pasture land between the two. This area has thinly scattered over it prickly green bushes of *tundub* which become more frequent towards the foot of the Jebel. One of these thorny bushes occupies the summit of the mound on which the ancient site is placed. It is the view to westward on leaving the village behind one and on approaching the mound that is shown in the photograph [Pl. LXIII 1]. [Pl. LXIII 2] shows the mound with the *tundub* bush prominent on the top of it looking south-east over the village athwart the plain. [Pl. LXIII 3] gives a view of the mound looking north. The end of the Jebel on that side is in the left background while the round wattle-walled and straw-thatched huts of the village appear in the background to the right. The view in the opposite direction to the south is shown in [Pl. LXIII 4]. The background of the plain is visible to the left of the mound, to the right in the near distance are the fallen granite boulders which form a projecting spur to the Jebel in this direction.

“As can be clearly seen from the pictures the prominence of the mound as it stands out with curving outline in the general level of the plain is what attracts attention to the site. On going right up to it one detects the artificial character of the mound at once. This artificial character is betrayed by the potsherds and debris of bricks that crop up on the surface, while both are entirely lacking on the level ground all round once one has moved away a few paces from the circle formed by the mound.

“On closer inspection this circle is seen to enclose a rectangle of rough wall foundations in stone oriented north-south and east-west. These foundations can be traced at intervals on all four sides of the building indicated by their presence. The roughness of the construction put into relation with the debris of fallen bricks that crop up on the surface alongside as well as elsewhere would at first sight suggest that the stonework was itself but the foundation to walls carried out in brickwork above.”

We need not follow the day-by-day progress of the excavation in detail. Mackenzie began by tracing the outer face on the entire perimeter of the rectangle of rough wall foundation observed on the preliminary inspection of the site (Pl. LXIV 1). The thickness of the wall was found by sinking small shallow test-pits to expose its inner face at wide intervals on all four sides of the rectangle (Pl. LXIV 2). Digging was not carried farther below the surface than was necessary, either on the outside or the inside of the wall, and the earth removed during these operations was all sifted and searched by hand.

The outside dimensions of the rectangle, as already noted, were found to be about 25 by 20 metres, dimensions which at first appeared, by singular good fortune, expressly adapted to a division of the area into a series of 5-metre squares. But when Middleton arrived to plot out the site it was found that the wall construction, although rectangular to the eye, was not strictly so in fact. Mackenzie thereupon abandoned the idea of dividing the area into squares based on the

walls themselves, and decided instead to adopt a system of 20-metre squares similar to that already in use at Jebel Moya. A series of squares was accordingly set out over a fairly wide area, but only two were ever used, namely, N. 10, O. 11 and N. 11, O. 12, in which lay the wall construction. These squares were subdivided into 5-metre squares, referred to in the diary as "plots" and denoted by letters of the Greek alphabet as indicated in Fig. 22.

The clearance of the area inside the walls was begun in the four plots α , β , γ , and δ in square

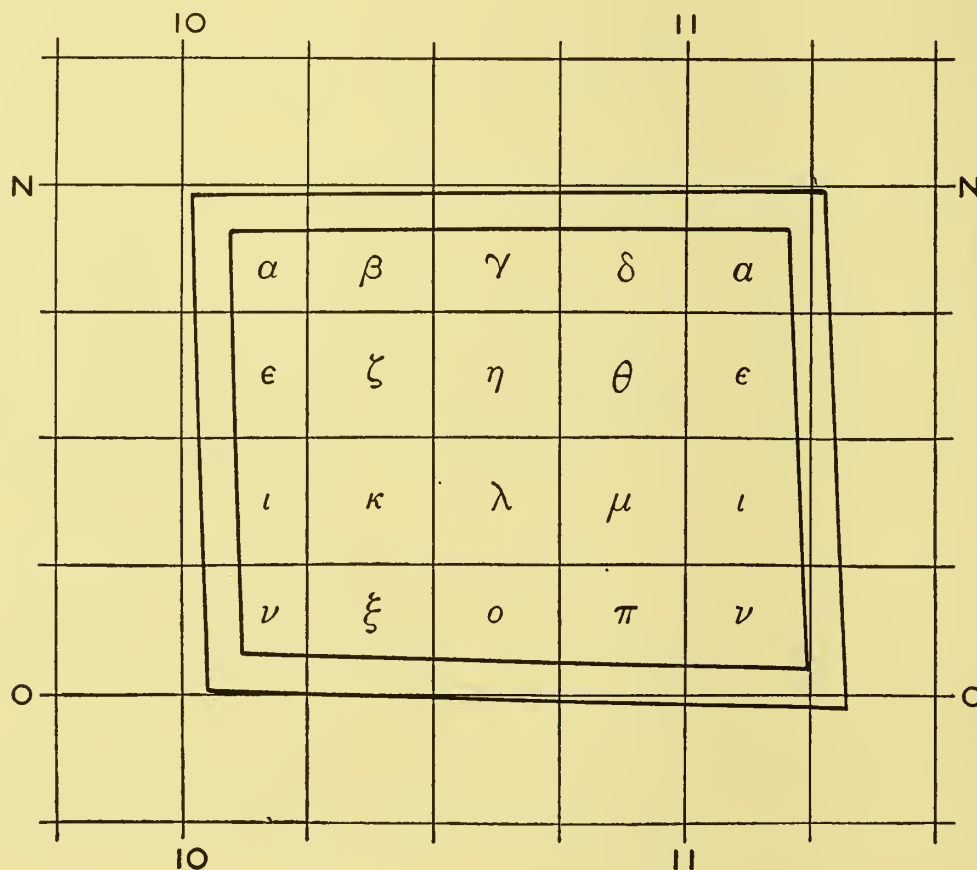


FIG. 22. Plan of Site 200 showing division into 5-metre squares.

N. 10, O. 11 (see Pl. LXIV 3). The excavation then moved southward to attack in turn successive rows of four 5-metre squares until the whole of the large square N. 10, O. 11 had been cleared as far as was practicable at the time. After this the four plots at the east end of the enclosure, included in the 20-metre square N. 11, O. 12, which had hitherto been retained as controls, were excavated. In the course of these operations pillars of debris were left standing at convenient points to enable the examination of the strata to be revised if necessary, and two strips intersecting in the centre of the enclosure were left for a time as a guide to Middleton in preparing the sections of the mound.

Red-brick construction, as distinct from red-brick debris, was first encountered in plot θ and it was not long before brickwork appeared in the adjoining plots η , λ , and μ , also in plot κ . The building as finally cleared is described in Chapter XI, but it may be said here that, since it was not

removed, no excavation could be carried out directly underneath it. The plots adjacent to the walls on all four sides of the enclosure were excavated down to rock, but we do not know what lay—and still lies—beneath the floor of the central building.

The excavation of the outer faces of the stone wall was left as much as possible to the last so as not to interfere with the entrance and exit of the workmen digging inside the enclosure. The two brick stairways (*see plan*), which seemed for some reason to excite Mackenzie's particular interest, were therefore the last of the building remains to be uncovered.

In addition to the excavation of the walls and buildings, a series of test-pits, 1 metre square, was sunk at Mr. Wellcome's instigation and three of them in his presence. The first of these, to quote the diary, "was put in line with the E-W section of the site at a distance of 15 metres west from the west wall of the building". . . . "A second test-pit was sunk in line with the N-S section of the site at a distance of three metres from the north wall of the building", and another "was sunk in line with the division between the plots β and α and 9 metres north of the north wall of the building". [*Note.* It is obvious from the context that the term "building" in the foregoing extract is intended to refer to the stone wall of enclosure.] Later, a further series of test-pits was excavated which was set out on lines passing, one north-south and the other east-west, through the centre of the rectangle formed by the enclosing wall. The pits were at 5-metre intervals from the four external faces of the stone wall and were numbered in order of their distances from these faces. There were four on the north side, two on the east and on the south, and three, including the first to be dug, on the west side. North test-pit No. 1 was really an extension of the second of the original pits mentioned above. The results obtained from the excavation of these pits are dealt with below.

STRATIFICATION

The stratification of the mound is shown in the section accompanying the plan in the pocket at the end of the volume, which has been re-drawn from one of the wash-coloured sections originally prepared by Middleton. Three main strata were distinguished, the middle one being of a much lighter colour than the top and bottom layers—a sequence which offers a curious parallel to that observed at Jebel Moya. These strata, as Mackenzie points out, represent three periods in the occupation of the site; but he does not say, and it does not necessarily follow, that the strata mark a series of occupations by different sets of people. Whether there were, in fact, different occupations, or whether the site was continuously occupied by successive generations of the same people, is a matter for later discussion.

Mackenzie's diary contains no observations on the nature of the strata before he started excavating inside the enclosure. His description of the top-most stratum within the walls, when he first encountered it, is as follows:

"The supersoil consisted of a gritty grey-brown accumulation with many granite particles which had evidently collected in the course of time after the building had fallen into ruins. It lay in thin strata at a good many points such as might indicate a periodic accumulation in times of winter [*sic*] rain. Next the surface was a hardened crust of this earth such as usually is caused by baking in the sun during the hot part of the year. Below this surface crust the earth was much more loose and at parts fell away on contact with the pick. The granite particles resembling fine gravel increased in quantity from the surface downwards and gave place suddenly to a much finer grey somewhat ashy earth of much paler hue at a depth which varied from 25 cms.

at the west end to 35 and 40 cms. at the middle, and 50 to 60 cms. in parts in plots γ and δ which are somewhat higher up the mound in the eastward direction. The surface of the ashy layer was also hard and compact on the surface as if it might have been a floor and possibly it was such."

The exact colour of this upper stratum is perhaps not of particular archaeological importance; shades are difficult to describe with precision, and possibly the colour varied somewhat in different places. But, since we are dealing with Mackenzie's records, it is as well to note that, while at first (*see above*) he describes a "grey-brown" accumulation, he later at different times refers to a "dark supersoil", a "ruddy dark supersoil", and once to a "black supersoil".

No such uncertainty attends the colour of the middle stratum. It is invariably referred to as "ashy-grey". The stratum below this, which rests upon virgin rock, is described simply and non-committally as "dark" in colour.

The ashy-grey middle stratum was sharply differentiated from the darker layers above and below it, and, within the wall of enclosure, it was bounded both at top and bottom by "floors". The lower and earlier floor, which formed the demarcation between the lowest dark layer and the ashy-grey stratum, was observed everywhere inside the enclosure where it was possible to penetrate into the lowest stratum. It occurred at a level about 50 cm. above the rock and it was also found to extend outside the walls. As regards the nature of this floor, the following extracts from the diary are informative. In plot σ "the floor level was marked by a well-defined floor of grey clay which formed a paler streak when seen in section and which was some 8 to 10 centimetres in thickness". Again, in plot ξ "the pale strip which marks the unbaked brick debris above the floor is specially distinct . . . and shows at intervals all along the fragments of unbaked bricks intact. The floor itself on which the brick debris rests is of much darker hue though itself appearing light against the earlier deposits underlying it. It is apparently made of a compact well sifted clay carefully laid on and is altogether from 8 to 10 centimetres thick." [Attention is called at this point to the fact that broken mud-brick was found lying on this early floor.] Still further in the diary Mackenzie wrote: "The floor had its surface level just above the base of the stone wall and . . . it seemed to be the first floor that was laid after the stone walls of enclosure were built."

The later floor, which separated the ashy-grey layer from the dark upper stratum, apparently had some connection with the red-brick building within the enclosure. Mackenzie wrote: "In the central area the change in the hue of the deposits where the [red brick] wall constructions were present was more sharply marked by the existence of actual plaster floors." A later entry reads: "The third period [*i.e.* of occupation] is marked by a hard grey-coloured mortar or concrete floor with granite particles in it at about 120 cm. higher up than the second period floor. . . . This floor is very clearly distinguishable in the section on the east side. It corresponds in level and character with the floor of the central building and is continuous with that. . . ." Elsewhere, however, Mackenzie noted: "This floor itself is *uniformly* [his italics] 1.10 metres above the level of the earlier floor." In yet another place he refers to the "concrete-like plaster floor of the central building", so there can be little doubt that this upper floor was deliberately laid down by man and was not an accidental product of nature such as a layer of dried mud.

The fragments of brick and of brickwork out of position which were found in the strata are less appropriately dealt with here than in the chapter devoted to the building. It should, however, be observed at this point that remains of *burnt* brick were never found below the later floor but always above it, while *unburnt* brick was found neither in the top nor the bottom dark layer but

only in the ashy-grey stratum. Mackenzie, indeed, wrote: "The distinguishing character of this stratum is the occurrence in it of unbaked bricks in fragments." He therefore concluded, with some apparent justification, that the ashy-grey hue of the middle stratum was due to the disintegrated substance of these unbaked bricks. The present writer, with some experience of mud bricks, finds it difficult to accept this view. There is no dye or colouring matter in a mud brick which could diffuse itself into the surrounding earth, nor is there any reason why some mud bricks in the stratum should completely disintegrate while others remained quite unaffected. This middle stratum at Saqadi seems, from Mackenzie's description, remarkably akin to the grey B stratum at Jebel Moya, and it is difficult to escape the conclusion that the same agency, whatever it may have been, was operative in both places, though not necessarily at the same time. The colour of the B stratum at Jebel Moya was due to the presence of calcium carbonate, although the origin of this excess of calcium carbonate has not been satisfactorily explained. No chemical analysis

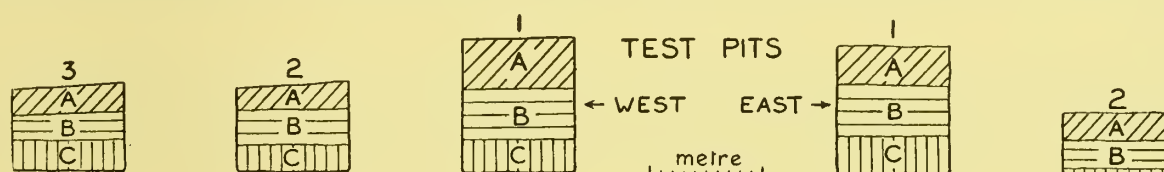


FIG. 23. Diagrammatic sections of test-pits

of the grey stratum at Saqadi was ever made, but there cannot be much doubt that the colour here, too, was due to calcium carbonate; much of the pottery from this stratum was lime-encrusted.

Although Mackenzie does not refer to the matter in his diary, it is clear from his object registers that he used the letters A, B, and C to denote the strata at Saqadi in the same way as these letters were used at Jebel Moya. A denotes the upper dark layer, B the middle ashy-grey layer, and C the lowest dark stratum in which traces of occupation were found. This nomenclature will be adhered to in the pages which follow.

The excavation of the test-pits referred to on p. 115 showed that these strata, first identified inside the enclosure, were also present outside the walls in layers gradually diminishing in thickness as the distance from the walls increased. Fig. 23 shows in diagrammatic form the results of the excavation of the test-pits on the east-west axis of the mound, based on information given in the diary. The bottoms of these pits were not necessarily on the same level, for it cannot be assumed that the underlying rock was free from irregularities or was itself truly horizontal. On the west, No. 1 pit was 5 metres from the wall, No. 2 was 10 metres, and the third (actually the first test-pit to be dug, *see* p. 115) was 15 metres west of the wall. Mackenzie's description of the contents of the first two of these is as follows:

"West Test-pit 1. Here the black supersoil contained the usual fragments of baked bricks which occurred generally immediately adjoining the wall outside. This dark surface stratum went down to a depth of 40-50 centimetres from the surface. Along with the fragments of baked bricks it contained occasional fragments of the incised and unincised hand-made and hand-polished and common unpolished sooty grey-black clay pottery already familiar to us from this surface stratum. The pottery as well as the bricks belonged to the same period as the building but both were out of their true connection and the stratum in which they occur belonged to the era of ruin of the building. The pottery consisted of sherds thrown about anyhow and none of it belonged to floor deposits; the bricks were no longer in their true connections in the walls to which they belonged.

"At 40 centimetres down the character of the deposit changes and the fragments of baked bricks cease to occur. The earth changes to a somewhat pale ashy-grey hue without any debris of baked bricks and it is possible that the paler hue may be due to the debris of sun-dried bricks. At any rate this stratum represents the period of real habitation of the site. The pottery that occurs in it is not essentially different from that in the dark upper stratum which also contained the fragments of baked bricks. The lowest levels of this stratum are at about 90 centimetres from the surface and it is about 40-50 centimetres thick. At about 90 centimetres from the surface the habitation deposits cease and with them the pottery. The surface of the *natural earth* is reached as it was before habitation and at a depth of about 1.20 metres the granite detritus gets harder and the granite virgin rock is touched.

"West Test-pit 2 is five metres west of Test-pit 1. Here the dark superstratum with occasional fragments of baked bricks is much thinner than in Test-pit 1. On the east side of the pit it is 25 centimetres thick while on the west side it is hardly more than 15 centimetres. At this depth the fragments of baked bricks cease and the earth changes to a slightly lighter hue with the usual fragments of pottery which go down to about 60 centimetres. Here they cease, the granite detritus earth is touched, and at 80-75 centimetres the granite virgin rock is reached."

In test-pit No. 3, as was to be expected from its greater distance from the wall, no debris of baked bricks was found and only a few stray sherds of the usual kind of pottery. The dark super-soil was 25 cm. thick, the ashy-grey stratum 20-25 cm., and the granite rock was reached at 75-78 cm. from the surface.

Analogous results were obtained from the excavation of the east test-pits. In each of them the three strata were present, there were the familiar potsherds, but there were only a few fragments of baked brick in the A stratum of Pit No. 2, the farther of the two from the wall.

The excavation of these test-pits showed clearly that deposit must have accumulated outside the wall at much the same rate as it did inside the enclosure, and it seems probable that, at any given time, there was not much difference between the level of the debris inside, and that which had drifted up against the external face of the enclosing wall. The finding of potsherds in the test-pits shows also that habitation was not confined to the interior of the enclosure.

Now it cannot be supposed that, in the natural course of events, dust and debris of occupation would accumulate against the eastern and western faces of the wall and leave the north and south faces clear. Indeed, the results of some of the test-pits on the north-south axis of the mound were similar to those already given. Thus, in north test-pit No. 2, 10 metres from the north wall, there was the usual dark supersoil with fragments of baked bricks, there was the ashy-grey stratum with fragments of pottery, and below it lay the dark C stratum. In north test-pit No. 3, 15 metres from the wall, there were only a few small fragments of baked brick and the ashy-grey stratum was not distinguishable. In north test-pit No. 4, 20 metres from the wall, there was no A stratum, no red brick, and the ashy-grey layer was only some 15 in. thick. In all these results there is nothing unexpected; they show the natural thinning out of the strata as the limit of the mound is approached.

When, however, we come to examine the results of the excavation of north test-pit No. 1 which was a northward extension of one of the pits dug in Mr. Wellcome's presence, we find a markedly different stratification. In this pit, Mackenzie notes:

"the supersoil with plentiful fragments of baked bricks went down to a floor level which was at 85 centimetres from the surface at the south side of the extended trench. The debris got paler and the fragments of brick rarer as the floor level was approached. This *external* 'floor' probably represented the surface at the point of habita-

tion of the building. Beneath this 'floor' the deposits get darker once more and [? extend for] 20 centimetres till the rock is reached at 1.15 metres from the surface. At a level corresponding with the lower surface of the external floor stratum the pottery ceases."

Similar results were obtained from the excavation of the corresponding test-pit on the south side of the enclosure, south test-pit No. 1, 5 metres from the south wall. This pit, observes Mackenzie,

"has the usual ruddy dark supersoil strongly emphasised. The ruddy hue now noticed is due to impregnation with the debris of baked bricks. These were plentiful in the pit, three baskets of large fragments and about two of small fragments having come out. From the middle to the bottom of this stratum the brick fragments appeared literally packed. They came to an end with a well marked habitation 'floor' at 1.1 metres (north side) and 75 centimetres (south side) from the surface. This 'floor' was marked by a pale grey ashy strip in the deposits which may mark the time when habitation began on the site. The rock was reached on the south side of the pit at 1 metre from the surface."

Mackenzie himself somewhat surprisingly fails to comment on the unusual results obtained from the excavation of these two test-pits, especially of that near the south wall. In all the others red-brick debris was confined to a clearly defined layer of dark supersoil—the A stratum, whereas in the two pits in question there is no ashy-grey stratum and the red-brick fragments extend for a considerable depth down to a "floor", a floor, moreover, which seems to be the same as the "early floor" already described on p. 116. It is evident that in the neighbourhood of these two pits the usual strata had either been disturbed after they had been deposited or they had been prevented from accumulating at all by the inhabitants of the site during some part of the occupation.

At the time the pits were excavated Mackenzie was unaware of the existence of the two brick stairways which were later found against the north and south walls of the enclosure, but it can be seen now that the pits were very close to these constructions. It is therefore probable that the unusual stratification revealed by the excavation of the pits in question was in some way connected with the building of the stairways. This point will be more fully discussed in Chapter XI.

CHAPTER X

MISCELLANEOUS FINDS

THE small objects found at Saqadi were for the most part of the kind which, in a museum, are relegated to the shelves and cabinets of the student collection rather than displayed in the show-cases of the public galleries. They were, moreover, of the same kind as those later found at Abu Geili and are evidence of the close cultural bond which must at one time have existed between the two sites.

The various types of objects have already been discussed at sufficient length in the report on the excavation at Abu Geili and, to avoid unnecessary duplication, frequent reference to that report will be made in the pages of the chapter which follows. This does not in itself aspire to be more than an annotated catalogue of the different classes of objects recovered from the site at Saqadi.

POTTERY

The pottery consisted entirely of potsherds; not a single complete vessel was recovered, nor was it possible to reconstruct one entirely. Such rim sections as could be drawn are shown in Pl. LXV and a selection of decorated sherds is illustrated in Pls. LXVI and LXVII.

The sherds collected during the excavation from each stratum in each "plot" within the wall of enclosure were separately packed in baskets and the contents labelled. It is to be remembered, however, that not all the 5-metre squares were completely excavated; the B and C layers underlying the central red-brick building could not be touched without first removing the brickwork, and this was left *in situ*. Further, some of the baskets of potsherds brought to England, and stored for many years were soaked with water by the accident of war; in consequence, the labels inside the baskets, being written in pencil, were rendered indecipherable. The pottery from these baskets had therefore to be discarded as undocumented, though it appeared to be of much the same kind as that of which the provenance was known. For the reasons given, then, the number of collections from inside the enclosure available for study was only 21, 11 from the A stratum, 8 from the B stratum, and but 2 from the lowest or C layer. There were also a few collections from areas immediately outside the walls and from test-pits. It is unfortunate that so little pottery from the lowest habitation layer has survived; possibly there never was very much in this layer, but there is so little difference between the other collections which have been preserved that the loss of additional sherds from the A and B strata can be regarded with equanimity.

Nearly all the pottery was hand-made and was in general very similar to that found on the habitation site at Abu Geili, most of it being of black-polished ware with red-filled decoration, or of light brown burnished ware. There was very little wheel-made pottery, and some of that little was painted. Conspicuously absent from Saqadi were fragments of flat black-polished decorated bowls such as were found complete in the Abu Geili graves and, broken, at Dar el Mek, and also fragments of the "braziers" of coarse ware which occurred in some abundance at Dar el Mek and in smaller quantities at Abu Geili.

The rim sections which could be drawn were so few, and the reconstructions based on them so incomplete, that it seemed hardly worth while classifying them under specific type-symbols. In Pl. LXV, therefore, the drawings are arranged roughly according to type and simply numbered consecutively. Details of ware and decoration are given on p. 126.

As far as they can be identified, many of the pottery forms illustrated are already familiar from Abu Geili, but some of the sections shown were not found on that site. The thickening of the rim in sections Nos. 18 and 19, for instance, was not observed at Abu Geili nor was the flared neck No. 25, which is nevertheless of a type hitherto associated with those indeterminate sites which are later than Meroitic yet not demonstrably either X-group or Christian. Such rims as Nos. 29 and 30 were also not seen amongst the Abu Geili pottery.

The only wheel-made fragments shown in Pl. LXV are Nos. 35, 37, 38, and 39. This last, although broken, is complete, and, if it can be dignified by the name of a vessel, it is an exception to the statement that none could be reconstructed. It is from the A stratum in plot κ, is of unpolished red ware, and looks as if it might be Meroitic. It is the last object from Saqadi which Mackenzie recorded, and he assigns it tentatively to the "period of the brick building".

The large bowl, No. 35, is reconstructed from sherds of wheel-made and painted ware which were amongst the first objects to be recorded. They were found outside the enclosure close to the surface during the preliminary clearing of the south face of the stone wall. The fragments are of fairly soft, micaceous, red ware covered with a red slip and the middle third of the fracture is grey except in the thinner parts. The bowl had been painted greyish-brown above the shoulder with a band about 1 cm. deep of the same colour inside the rim. On this ground colour, outside the bowl, two wide white bands had been painted with a paler red-brown stripe (shown hatched in the drawing) superimposed on each; between these was a row of small white crosses. Just below the shoulder, and below the painted band, were scratched at intervals round the pot the symbols which are reproduced at No. 36 in the plate. The rim, No. 37, is built up from two fragments of painted ware similar to that just described and the base, No. 38, may possibly, but not certainly, have belonged to the same pot. Two other painted fragments, not illustrated, were found in the A stratum in the south-west corner of the enclosure.

So little painted pottery has been found south of Khartoum that this kind of ware cannot be dated with any accuracy. It resembles neither the usual Meroitic painted pottery nor the known Christian pottery found in the Northern Sudan, and it is altogether different from the painted ware which occurred at Jebel Moya. The nearest approach to this Saqadi pottery within the present writer's experience are a few small fragments of painted pottery from a site near Khartoum.¹ The writer, at the time these were found, suggested that they were to be assigned to the transition period when the last remnants of the Meroitic culture and that which followed the introduction of Christianity existed side by side. On this same site, it may be added, a bowl was found which bore inside the rim the same "broad arrow" symbol as that to be seen on the outside of the bowl from Saqadi.

Of the decorated sherds illustrated in Pl. LXVI those at A are from the A stratum and those at B from the B stratum. They are fully described on p. 127, but it may be said here that most of them are either black-polished or brown burnished and that the filling of the decoration, where it exists, is red. Only two observations need be made about these sherds. The first is that there is

¹ *A Christian Site near Khartoum*, by F. Addison, *Sudan Notes and Records*, vol. XIII, p. 285.

little perceptible difference between those from the A and B strata; the second is that they are of exactly the same kind as some of those found at Abu Geili, as may be seen by comparing these photographs with those of the Abu Geili pottery in Pls. XXXIV–XXXIX.

A few other sherds from Saqadi are shown in Pl. LXVII A. These are from the B stratum except Nos. 6, 7, and 10 in the photograph, which are from the A stratum yet show a reversion to an early type. The fragment No. 1 is decorated with a rocker of much finer gauge than the implements usually used at Saqadi and resembles some of the fragments from Jebel Moya. The fragments Nos. 3 and 5 are lug handles and No. 4 has a decoration of knobs.

In addition to the decorated fragments there occurred in both strata and in almost every “plot” quantities of plain sherds, both of fine and coarse wares. The finer pottery was either of red ware, more often with a red slip than without, or of black-polished ware; these latter fragments may, of course, have been plain fragments of decorated vessels. The coarse pottery was also either red or black. Although these two standard colours predominated, the collections included sherds of indeterminate colours ranging from brown to grey.

Such pottery from the C stratum as has survived is not markedly different from that from the other strata. The samples examined contained no fragments of wheel-made ware and only one black-polished sherd with red-filled decoration; but there were a few fragments of light brown ware decorated with impressed designs of the same kind as those found in the higher levels, and the undecorated sherds appeared to be much the same as the plain fragments from the other layers. Two pottery disks were found in this stratum, one plain, and the other made from a sherd which had a rocker-impressed decoration. The fragment of a small red ware bowl, with “stabbed” decoration (Pl. LXV 32), is also from the C stratum.

A few miscellaneous pottery objects are shown in Pl. LXVII B; they consist for the most part of disks or ring fragments of the kind already encountered at Jebel Moya and also at Abu Geili and which need no further comment here. The disk No. 17 is one of those found in the C stratum. Of more interest is the broken pottery pick imitating a stone form; it has not been very well fired and is red only in patches.

The two fragments Nos. 18 and 19 are of painted pottery and are entirely different from anything else found on the site. No. 18 has a red and brown design on a cream ground and has both the look and the “feel” of the medieval Christian pottery found in the Northern Sudan. It is, however, to be regarded with reserve; although discovered by the writer amongst the material from Saqadi separately packed in a glass-fronted metal box, it is neither registered nor commented upon by Mackenzie, hence there is more than a suspicion that it may not have come from Saqadi at all. The fragment No. 19, according to the records, comes from the siftings of the B stratum in the north-west corner of the enclosure. The pattern here is of red lines on a cream ground and the ware has a harder and more highly polished slip than is usually found on Meroitic pottery. The sherd may nevertheless be Meroitic, but it is too small to support any definite conclusion.

BEADS

More beads were recovered from the A stratum than from the B, possibly because fewer “plots” in this latter stratum were excavated, and very few were found in the C layer. Those illustrated in Pl. LXVIII are all from the A stratum, mostly from siftings, and have been strung

as shown for convenience in keeping the various kinds together. Details are given in the Description of Plates at the end of the chapter.

All these beads are of kinds which were also found at Abu Geili, but some types which occurred on this latter site are not represented at Saqadi. There were, for instance, no red, white, and blue glass beads found at Saqadi, and faceted agate and carnelian beads were rare; only three of these latter were, in fact, found—the “date” bead, No. 11 in the photograph, and the two faceted beads in the short string of carnelian beads No. 7. Apart from these, and the glass beads No. 12 in the plate, there is nothing to suggest a medieval occupation and it is more likely that the beads in question were dropped by visitors to, rather than by inhabitants of, the site.

No faceted carnelian or polychrome glass beads were found in the B stratum, but otherwise the beads which occurred in this stratum were of the same kind as those from the A stratum, though fewer in number.

The only beads found in the lowest occupation level, the C stratum, were four small disk-beads of ostrich egg-shell, a mud pendant, and a segmented faience bead of the kind found at Abu Geili. Another segmented faience bead was recovered from the B stratum. The comparative rarity of this kind of bead has already been remarked upon in Chapter V.

SPINDLE-WHORLS

Spindle-whorls of baked pottery did not occur at Saqadi in very large numbers; only sixty-two of these objects were registered and most of these were mere fragments, many of them from siftings. From the nature of the excavation the majority of the whorls came from the area within the stone walls, but several fragments were found outside the wall during the operation of clearing its external face, and a few were recovered from test-pits. It would seem, therefore, that the fragments must have been fairly widely distributed over the mound.

All the decorated complete whorls and some of the larger fragments are illustrated in Pl. LXIX A and described on p. 129. Those numbered from 1 to 6 are from the A stratum and the remainder, with the exception of No. 9, are from the B stratum. No. 9 is from the C stratum, 35 cm. above the rock in plot λ, and it is the only object of this kind to be recorded from this lowest stratum. It is decorated with the same “broad arrow” device that appears on the painted bowl found near the surface of the mound and described earlier in this chapter.

Some of the incised designs with which the smaller fragments are decorated are reproduced in Figs. 24 and 25, those from the A and B strata being shown separately. No colour remained in the patterns on the fragments from the A stratum, but, of those from the B stratum, traces of white filling survived in the patterns on Nos. 3 and 16, red filling in that of No. 14, and yellow and white (a yellow cross in a white square) in that on No. 4. The fragments are now in Khartoum.

Nearly all the designs are either duplicates or variants of the incised patterns to be seen on the spindle-whorls from Abu Geili, and the objects themselves show the same cultural relationship with that site as is displayed by the pottery and beads. At Saqadi, however, there were no whorls decorated with seal or stamp impressions, nor were there any bearing naturalistic designs of birds. The only stamped or impressed pattern found at Saqadi is that seen on fragment No. 14 in the photograph Pl. LXIX A, and this pattern, as has already been pointed out, was probably made with nothing more elaborate than a split reed. The object No. 10 in the photograph is of a shape

which was not found at Abu Geili; it is, perhaps, to be regarded as a large bead rather than as a spindle-whorl.

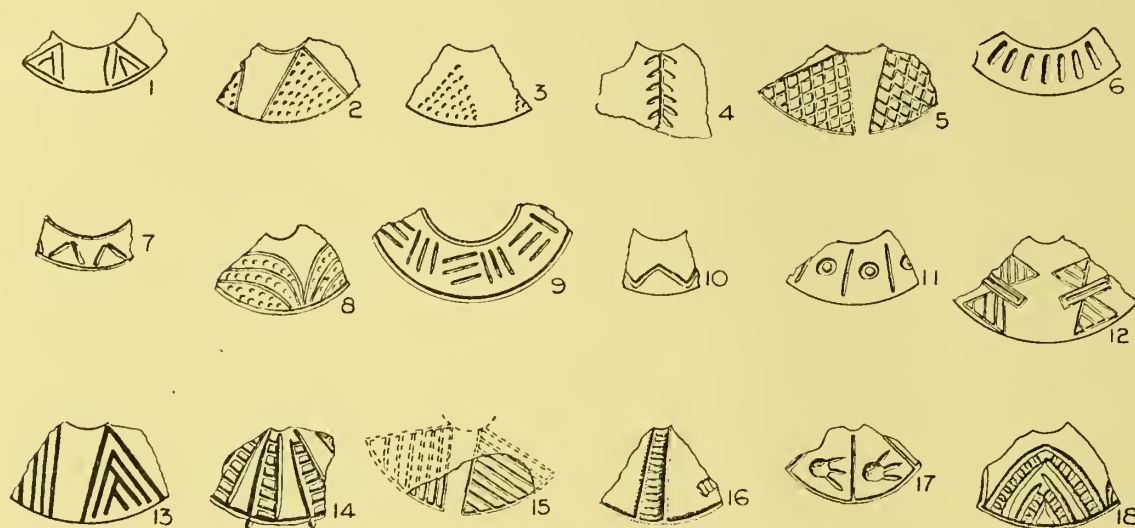


FIG. 24. Designs on spindle-whorls from A stratum. 1:2



FIG. 25. Designs on spindle-whorls from B stratum. 1:2

METAL OBJECTS

The metal objects are illustrated in Pl. LXIX B and described on p. 129. Once again the objects from the different strata are displayed in separate groups, and in this photograph those from the A stratum are Nos. 1 to 22 inclusive, those from the B stratum Nos. 21 to 33, while the fragment No. 34 is from the C stratum. With a few exceptions, which will be enumerated, all the objects, such as they are, are of iron.

The arrow-heads are similar to those found at Abu Geili and fully discussed in connection with that site. Objects of a kind not met with either at Abu Geili or Jebel Moya are the iron bi-cone beads, Nos. 7 and 8 in the plate, the small crosses of iron, Nos. 10 and 11, and the iron bowl (?),

No. 20. The iron beads are interesting because unusual; beads of this metal are rare and it is probable that these examples may have had an amuletic value. They do not appear to have been drilled but to have been forged solid on a mandrel. The iron crosses can hardly be attributed to any other period than the Christian and not very early Christian at that. Like other early crosses they have their suspension loops at the foot of the cross instead of, as in modern times, the top. They are each of them delicately fashioned in one piece and, besides being much smaller, are of much finer workmanship than the iron crosses found in the Christian church near Wadi Halfa.¹ They were recovered from A-stratum siftings, No. 10 from near the south wall and No. 11 from "plot" o. The object No. 9 in the photograph may also be the remains of a cross.

The fragment No. 20 was registered by Mackenzie as "part of an iron bowl", but inside, at the bottom, is a projecting boss which may have been intended to hold an upright rod. The metal is so badly corroded that no details can be made out, but in section it is approximately as shown in Fig. 26.

The bezel ring No. 6 is of iron, though the bezel is uninscribed; like the beads, this, too, may perhaps have been worn for its supposed amuletic or magical value. The ear-rings, Nos. 17, 19, and 28 are also of iron.



FIG. 26. Section of iron bowl. 1:2

Objects of bronze are the fragment of a bezel ring, No. 5; the parts of two different bells, Nos. 12 and 13 (12 with the remains of an iron clapper); the ear-rings, Nos. 14 and 18; the tubular bead No. 15, and the pin No. 16. All these are from the A stratum; no bronze or copper objects were found in the B stratum.

STONE OBJECTS

The stone objects consisted of upwards of a hundred rings or mace-heads, nearly all of them broken, and some fragments of archers' looses. There were also two small sandstone balls and a small sandstone rubber. A selection of the mace-heads is shown in Pl. LXX A, Nos. 1 to 9 in the upper part of the photograph, being from the A stratum, and Nos. 10 to 18 from the B stratum. There does not appear to be any significant difference between the two groups. All the objects except No. 1 are of sandstone or grit-stone, and it will be seen that several of them were broken during manufacture, as were the majority of the objects found.

The most common type is one which could be called either a ring or a mace-head but which would not, it would seem, be particularly useful in either capacity. These things are of the form VI. t. 2 or VI. t. 3 in the Jebel Moya classification. Practically all of the mace-heads broken during manufacture are of singularly crude workmanship, and, if the skill of the Saqadi artisan is to be judged by these examples, it is highly improbable that the object No. 1 in the photograph—a diorite mace-head of Jebel Moya type VII. A. b, well finished and polished on the outside—was made at Saqadi at all. It is fairly safe to assume that it was brought there from another and earlier site. Another object, not shown in the photograph, which may have come from Jebel Moya at some time is a small and much battered fragment of a heavy stone armlet of Jebel Moya type VI. k. 1; it was found in the B stratum at Saqadi.

Some fragments of archers' looses are illustrated in Pl. LXX B; Nos. 1 to 6 are from the A stratum and the remainder, in the right-hand half of the photograph, are from the B stratum.

¹ *Churches in Lower Nubia*, by Geoffrey S. Mileham (Eckley B. Coxe Junior Expedition to Nubia), vol. II, Pl. 38 (b).

Details of the materials are given on p. 130. It may not be of any particular significance but it is worthy of note that, while all the fragments from the B stratum are of igneous rock, only one of those from the A stratum is of hard stone of this kind, viz. No. 1, which is of syenite. These objects, already familiar from other sites, have been adequately dealt with in the Abu Geili section and do not call for further remark.

MISCELLANEOUS

The most interesting, in its context, of the unclassified objects is a flaked leaf-shaped arrow-head of chalcedony with the point and tang broken off, 22 mm. long. It is O.C. 335 (now in Khartoum) and was found in the siftings of the B stratum outside the south wall. It is of a different shape from the flaked arrow-heads found at Jebel Moya and its presence at Saqadi is difficult to explain; possibly it was brought to the site from elsewhere. There were in addition two somewhat rough chalcedony flakes similar to Fig. 47 from Dar el Mek.

Other objects which may be catalogued are a few *aspatharia* shells; two clay animal figurines of the familiar type; a pottery lip-stud of the Jebel Moya type (and probably brought from there); and a small quartz lip-stud of a kind not found at Jebel Moya. There was also a nose-stud (O.C. 387) from A stratum siftings similar to that from Abu Geili shown in Pl. LIV B, 4.

DESCRIPTION OF PLATES

PLATE LXV. Pot sections. [All to Khartoum]

1. Black-polished inside and out; two shallow finger channels inside. B stratum.
2. Similar to (1) above. A stratum.
3. Coarse grey ware with red slip. Hand-made, but with a number of channels as in No. 1. B stratum.
4. Black-polished on both sides. Stratum unknown.
5. Red-brown ware polished on both sides; pattern roughly scratched after polishing. B stratum.
6. Grey-brown ware, burnished; incised red-filled zigzag inside lip. B stratum.
7. Smooth black ware; red-filled decoration outside and on flat rim. A stratum.
8. Black-polished on both sides; hatched rim; red-filled decoration. A stratum.
9. Buff to black, polished on both sides; no decoration. B stratum.
10. Black-polished on both sides, no decoration. Stratum unknown.
11. Smooth black ware; smoothed shallow channels outside. A stratum.
12. Rough grey ware, burnished inside; rim with roughly impressed dots. B stratum.
13. Coarse light brown ware, black fracture, stabbed decoration. A stratum.
14. Fine light brown ware, burnished on both sides; "rocker" impressed decoration. B stratum.
15. Fine light brown ware, polished both sides; decorated with row of impressions of apex of snail-shell, red-filled. B stratum.
16. Black-polished on both sides; no decoration. A stratum.
17. Grey outside, brown inside, burnished both sides; pierced near rim. B stratum.
18. Black ware, brown outside, burnished inside lip and outside; incised decoration. B stratum.
19. Light brown burnished ware; "rocker" impressed decoration. B stratum.
20. Light brown burnished ware; "rocker" impressed decoration. B stratum.
21. Coarse grey ware; burnished outside; diameter uncertain. B stratum.
22. Light brown ware, burnished outside and for 4 cm. down inside lip; red-filled decoration. B stratum.
23. Light red-brown ware, burnished outside and inside lip. A stratum.

24. Black ware, smoothed inside, polished outside; incised decoration. A stratum.
25. Hard, coarse black ware, with red slip outside and in mouth only. A stratum.
26. Black ware with light brown slip flaking off on outside; red-filled decoration. B stratum.
27. Light grey-brown ware, burnished; hatched rim; decoration of deeply impressed diamond pattern. B stratum.
28. Light brown ware, burnished, black fracture; hatched rim; red-filled decoration. A stratum.
29. Coarse grey ware with red slip; roughly burnished outside and on rim. A stratum.
30. Coarse grey ware, brown-burnished outside and inside lip. A stratum.
31. Fine grey ware, burnished; hatched rim. B stratum.
32. Red granitic ware with "stabbed" decoration. C stratum.
33. Black ware, rough inside, burnished grey-brown slip on outside; red-filled decoration. B stratum.
34. Black-polished outside, rough inside; red-filled decoration. B stratum.
- 35-38. Painted pottery, *see* p. 121.
39. Unpolished red ware, wheel-made. O.C. 391. A stratum.

PLATE LXVI. Decorated potsherds

A. Sherds from A stratum

1. Black-polished, remains of red filling in decoration. [Khartoum]
2. Grey-brown burnished, remains of red filling in decoration. [Oxford]
3. Light brown burnished, remains of red filling in decoration. [Khartoum]
4. Black-polished, remains of red filling in decoration. [Oxford]
5. Black-polished, remains of red filling in decoration. [Khartoum]
6. Black-polished, remains of red filling in decoration. [Oxford]
7. Black-polished, remains of red filling in decoration. [Khartoum]
8. Black-polished, remains of red filling in decoration. [Oxford]
9. Black-polished, remains of red filling in decoration. [Khartoum]
10. Light brown burnished, remains of red filling in decoration. [Oxford]
11. Fragment of shallow bowl decorated on inside; outside black-polished, inside brown; red-filled decoration. [Khartoum]
12. Black-polished, remains of red filling in decoration. [Oxford]

B. Sherds from B stratum

1. Grey-brown burnished, remains of red filling. [Khartoum]
2. Black-polished, remains of red filling. [Khartoum]
3. Light brown burnished, remains of red filling. [Oxford]
4. Grey-brown burnished, remains of red filling. [Khartoum]
5. Black-polished, remains of red filling. [Oxford]
6. Black-polished, remains of red filling. [Khartoum]
7. Light brown burnished, slight traces of red filling. [Khartoum]
8. Grey-brown burnished, remains of red filling. [Oxford]
9. Fragment of shallow bowl decorated on inside; brown burnished; red-filled decoration. [Oxford]
10. Fragment of shallow bowl, decorated on inside; black-polished; red-filled decoration. [Khartoum]
11. Black-polished, red-filled decoration. [Oxford]

PLATE LXVII

A. Miscellaneous sherds. [Khartoum]

1. Fine grey-buff ware, burnished. B stratum.
2. Thick, dark brown ware, burnished. B stratum.
3. Lug; unpolished black ware. B stratum.
4. Rim fragment with bosses; unpolished red ware. B stratum.

5. Lug; coarse red ware discoloured by firing. B stratum.
6. Soft red ware with prominent yellow grains. A stratum.
7. Soft red ware with prominent yellow grains. A stratum.
8. Very thick, coarse, black ware. B stratum.
9. Brown ware, pebble-burnished; no filling in decoration. B stratum.
10. As 6 and 7. A stratum.
11. Light brown burnished; remains of red filling. B stratum.

B. Miscellaneous pottery objects. [Khartoum]

1. Pale grey ware. O.C. 22, from A stratum.
2. Black-polished ware. O.C. 75, from A stratum.
3. Lug handle, red ware; faint "rocker" impressions on end. O.C. 76, from A stratum.
4. Smooth grey ware. O.C. 79, from A stratum.
5. Black-polished on one side, grey on the other. O.C. 379, from outside north wall.
6. Model pick, discoloured red ware, O.C. 323, from outside west wall.
7. Disk ground from buff ware with red slip. O.C. 50, from A stratum.
8. Animal figurine, grey buff ware. O.C. 389, from A stratum.
9. Red ware. O.C. 116, from A stratum.
10. Red ware. O.C. 107, from A stratum.
11. Red ware. O.C. 146, from B stratum.
12. Black-polished ware with grooved edge. O.C. 171, from B stratum.
13. Coarse red ware. O.C. 173, from B stratum.
14. Grey ware. O.C. 277, from B stratum.
15. Fragment of bracelet, buff to black ware. O.C. 347, from B stratum.
16. Model pot. O.C. 369, from B stratum.
17. Red granitic ware. O.C. 252, from C stratum.
- 18 and 19. Painted pottery. *See* p. 122.

PLATE LXVIII. Beads from A stratum. [Khartoum]

1. Natrolite cylinder (*cf.* Jebel Moya).
2. White paste.
3. Red and yellow paste.
4. Quartz.
5. Red paste.
6. Pottery.
7. Carnelian.
8. Coloured glass; blue, green, yellow, white and red, unaffected by decay.
9. Hardwood.
10. Faience, pale green glaze, in many cases discoloured or worn.
11. Agate.
12. Polychrome and black and white glass.
13. Coloured glass (iridescent decay).
14. Ostrich egg-shell.

PLATE LXIX

A. Spindle-whorls. [All to Khartoum]

- Nos. 1-6 from the A stratum.
 Nos. 7-15 from the B stratum.
 Nos. 16-18 stratum unknown.

1. Bright red, soft ware, no trace of filling. O.C. 97.
2. Black ware, no trace of filling. O.C. 296.
3. Grey, brown-polished, no trace of filling. O.C. 230.
4. Red, traces of white filling. O.C. 99.
5. Red, traces of white filling. O.C. 68.
6. Red, traces of white filling. O.C. 261.
7. Red, traces of white filling. O.C. 150.
8. Bright red "granitic", traces of white filling. O.C. 189.
9. Grey, no filling. O.C. 275.
10. Grey, black-polished, undecorated. O.C. 165.
11. Soft, red "granitic", traces of red and white filling. O.C. 271.
12. Hard, micaceous, red and black, no filling. O.C. 188.
13. Grey to red, traces of white filling; cracked in drying or firing. O.C. 347.
14. Hard, bright red; split-reed stamps; white-filled. O.C. 73.
15. Black "Hand" devices, no filling. O.C. 169.
16. "Star" pattern, black polished. O.C. 121, from south test-pit 1.
17. Fine, bright red, trace of white filling. O.C. 388, from east of test-pit 1.
18. Brown to black-polished, no filling. O.C. 48, from south wall sifting.

B. Metal objects.

Nos. 1-20 from the A stratum.

Nos. 21-33 from the B stratum.

No. 34 from the C stratum.

1. Iron arrow-head. O.C. 384. [Khartoum]
2. Iron arrow-head. O.C. 215. [Oxford]
3. Iron arrow-head. O.C. 374. [Peabody]
4. Iron pin. O.C. 281. [Khartoum]
5. Fragment of bronze bezel ring with device. O.C. 214. [Oxford]
6. Iron bezel ring, no device. O.C. 375. [Khartoum]
- 7, 8. Iron bi-cone beads, from siftings. [Khartoum]
9. Remains of iron pendant (? cross) from siftings. [Khartoum]
10. Iron cross. O.C. 70. [Oxford]
11. Iron cross. O.C. 299. [Khartoum]
12. Half of small bronze bell with iron clapper.
13. Half of small bronze bell.
14. Bronze ear-ring.
15. Bronze tubular bead.
16. Bronze pin.
17. Iron ear-ring.
18. Bronze ear-ring. O.C. 382. [Khartoum]
19. Iron ear-ring. O.C. 382. [Khartoum]
20. Fragment of iron bowl (?). O.C. 258. [Khartoum]
21. Iron arrow-head. O.C. 331. [Khartoum]
22. Iron arrow-head. O.C. 330. [Peabody]
23. Iron arrow-head. O.C. 337. [Oxford]
24. Iron arrow-head. O.C. 329. [Khartoum]
25. Iron arrow-head. O.C. 359. [Oxford]
26. Iron arrow-head. O.C. 259. [Peabody]
27. Iron arrow-head. O.C. 246. [Khartoum]
28. Iron ear-ring. O.C. 365. [Peabody]

} from siftings.
[Khartoum]

29. Fragment of iron blade. O.C. 324. [Khartoum]
30. Iron pin. O.C. 248. [Khartoum]
31. Iron pin. O.C. 355. [Oxford]
32. Iron pin. O.C. 315. [Peabody]
33. Fragment of iron bracelet or anklet. O.C. 208. [Khartoum]
34. Iron fragment (? tweezers). O.C. 276. [Khartoum]

PLATE LXX. Stone objects

A. Mace-heads and rings

Nos. 1 to 9 from the A stratum.

Nos. 10 to 18 from the B stratum.

1. Mace-head, diorite. O.C. 49. [Khartoum]
2. Mace-head soft, yellowish, pale grey, calcareous sandstone (unfinished). O.C. 234. [Khartoum]
3. Mace-head, disk shape, same material as (2). O.C. 289. [Khartoum]
4. Mace-head, soft, ochreous sandstone (unfinished). O.C. 114. [Peabody]
5. Ring, or mace-head, hard, very coarse, yellowish sandstone. O.C. 326. [Khartoum]
6. Ring or mace-head, coarse, grey, calcareous sandstone (weathered and etched). O.C. 237. [Peabody]
7. Ring or mace-head, same material as (2). O.C. 102. [Oxford]
8. Ring or mace-head, granite with garnets. O.C. 67. [Khartoum]
9. Ring or mace-head, soft, pinkish, calcareous sandstone. O.C. 94. [Khartoum]
10. Ring or mace-head, hard, coarse, pink sandstone. O.C. 319. [Oxford]
11. Mace-head, soft, micaceous, pink sandstone (unfinished). O.C. 185. [Oxford]
12. Mace-head, pinkish quartzite. O.C. 251. [Peabody]
13. Ring or mace-head, soft, calcareous sandstone (etched). O.C. 239. [Khartoum]
14. Ring or mace-head, same material as (2). O.C. 193. [Oxford]
15. Ring, hard, coarse, pinkish, sandstone. O.C. 138. [Khartoum]
16. Mace-head, as (2). O.C. 182. [Oxford]
17. Mace-head, as (2). O.C. 149. [Peabody]
18. Ring or mace-head, porous, calcareous sandstone. O.C. 206. [Khartoum]

B. Archers' looses

Nos. 1-6 are from the A stratum.

Nos. 7-12 are from the B stratum.

1. Deep pink ? syenite. O.C. 58. [Khartoum]
2. Greenish ground, purple-mottled quartzite. O.C. 59. [Oxford]
3. Purple quartzite. O.C. 54. [Khartoum]
4. Creamy quartzite, with vein of jasper. O.C. 117. [Peabody]
5. Yellowish vein-quartz. O.C. 294. [Peabody]
6. Pale grey siltstone. O.C. 61. [Oxford]
7. Fine-grained, brownish, banded gneiss. O.C. 315. [Oxford]
8. Granite with pink felspar. O.C. 235. [Khartoum]
9. Diorite. O.C. 371. [Khartoum]
10. Diorite. O.C. 363. [Oxford]
11. Diorite. O.C. 342. [Peabody]
12. Diorite. O.C. 325. [Peabody]

CHAPTER XI

THE BUILDING REMAINS

It will be convenient to consider the building remains under four heads, namely, (1) the enclosing wall of rough stone; (2) the debris of mud brick; (3) the broken and scattered burnt brick; and (4) constructions in red brick. All these, of course, came into view a little at a time as the excavation proceeded and could not be described in the diary otherwise than in a series of disconnected instalments. The descriptions which follow are based upon these scattered notes and upon a study of the photographs; the reader is once again reminded that the present writer has not himself seen the building remains.

THE WALL OF ENCLOSURE

The general shape of this wall—a rectangle slightly askew with outside dimensions roughly 20×25 metres—has already been referred to; it is shown in the plan at the end of the volume and in Fig. 27. It was built of rough stone, presumably granite, selected from the boulders lying at the foot of Jebel Saqadi. “No attempt”, wrote Mackenzie, “was made to face the stones or to make any practical use of the splendid supplies of granite near by. The builders seem to have known nothing of construction in ashlar masonry. The wall shows a batter on both faces and its width is considerably greater at the base than higher up. This batter contributes much to the solidity [? stability] of the construction in view of the small unwrought stones of which it is composed.”

Some idea of the type of construction and of the size of stones used is given by the photograph Pl. LXIV 4, which shows the western external face of the wall. No cement was used, the facing-stones being bedded in mud mortar. The interior of the wall, according to a single reference in the diary, was filled with rubble set in mud.

The general appearance of the wall is shown in several of the photographs in Pls. LXXII and LXXIII. From all these photographs it is apparent—and it is a fact carefully noted by Mackenzie—that the wall was preserved to its greatest height in the middle of each of its four sides while the corners were most denuded; the top of the wall, in fact, followed roughly what was the contour of the mound before excavation began. Seven courses were preserved in the middle of the north and south sides, but, owing to the greater size of the stones used, the northern side was slightly higher than the southern, the respective measurements being 1.40 metres and 1.20 metres. On the west side six courses in the middle remained standing to a height of 1.05 metres, but in the highest part of the east side only five courses were left. The north-east corner, however, to quote Mackenzie again, “is better preserved than the south-east and it is more massively built. Only three courses exist but they take up a height of 0.70 metre from the base of the wall and the corner stones have been specially selected and roughly faced to suit their position.”

Such was the wall, and the extracts from the diary which have already been quoted in Chapter IX show that it must have been built before the ashy-grey B stratum was laid down. During the excavation of the wall no disturbance of the strata was observed such as would have been caused,

and which Mackenzie would not have failed to detect, if the wall foundation had been laid in a trench dug from a higher level through later deposits. On the contrary, all round the outside of the wall a habitation floor surface was found which partly or barely covered the lowest course of



FIG. 27. Plan of building at Saqadi. 1:200

the wall. This surface corresponded with the early floor inside the enclosure which separated the lowest dark stratum (C) from the lighter coloured stratum above it. Mackenzie had no doubt that the floors outside and inside the wall were part of the same habitation surface, a surface into which the lowest course of the wall was sunk just deep enough to give the stones a firm bedding. He therefore concluded—and there seems no reason to doubt his conclusion—that the building of the wall and the formation of the early floor were closely connected and were of the same date.

Nothing whatever was found which might give a clue as to the purpose for which this wall was built. The same kind of habitation remains were found outside the enclosure as inside it, and the same kind of deposits were laid down. The wall, therefore, does not seem to have been a fortification or a protective wall; it was, rather, a boundary wall which surrounded a building and enclosed only part of the habitation area.

THE DEBRIS OF MUD BRICK

It has already been observed that unbaked brick, usually in fragments, was found only in the B stratum of the deposit, and that it occurred there in such quantities as to lead Mackenzie to the belief that the colour of the stratum derived from that of the brick. Fragments of mud brick were found lying on the early floor wherever that floor was uncovered; they were frequently encountered during the excavation of the B stratum, and a heap of broken bricks extending almost to the top of that stratum was found in the north-west corner of the enclosure. This is shown in Pl. LXXI 1 and 2; broken bricks lying on the early floor may be seen in the foreground of the photograph (1) which was taken from the point marked (9) on the plan Fig. 27.

It is evident that a crude brick building of some kind must have been erected inside the enclosure soon after the stone wall was built and the early floor laid down. Such a building, exposed as it would be to the severe rain-storms of the summer, would require regular maintenance if it were not soon to fall into ruins. There is, however, no evidence to show whether or not it was kept in repair and in regular use, though it is to be noted that no brickwork in position, no remains of walls, were found. It is probable that the building, whatever it may have been, occupied a position in the centre of the enclosure directly underneath that later taken up by the red-brick building. The foundations of this latter building were left undisturbed and the area underlying it was not excavated; had this area been cleared, it is at least possible that some remains of crude brick walling might have been found. As it is, the history of the earlier building remains obscure, but the quantity of mud-brick debris found on the site might indicate that periodic rebuilding was undertaken if only to keep the walls clear of the rising tide of debris. It is a not unreasonable supposition that the red-brick building was erected to replace this earlier one in unburnt brick, and that the pile of broken mud brick in the north-west corner of the enclosure represents rubble thrown there when earlier walls were levelled in preparation for the later building.

"As regards the composition of the bricks", Mackenzie wrote, "a pale coloured mud mortar seems to have been used and this was copiously mixed with granite particles. Now that such quantities of the brick fragments were exposed to view it could be said that chopped straw was plentifully used in their composition. Other substances favourable to cohesion might turn out to have been present as the result of a special chemical analysis."

These mud bricks were all so badly broken that it was rarely possible to obtain reasonably accurate measurements, especially of the length of the bricks. Two that were measured were $33 \times 15 \times 6$ cm., and the two latter dimensions were fairly common for width and thickness respectively. Larger bricks were sometimes found; of unknown length they were 19 cm. wide and 7 cm. thick.

DEBRIS OF BURNT BRICK

Fragments of burnt brick were visible all over the surface of the mound before work on the site was begun, and quantities were found not far below the surface during the early part of the

excavation. They were not uniformly distributed over the site; they occurred in greater quantities in some places than in others. They were first encountered at the very beginning of the excavation when the clearing of the external face of the enclosing wall was started at its south-west corner. The relevant entry in the diary reads: "That the walls were substructure for brick was apparent. Quantities of bricks in fragments and all out of position came into view at once alongside the face of the substructure from the surface downwards." Similar entries occur in connection with the clearance of the other external faces of the wall, and in his summary of the results of the first week's excavation, Mackenzie wrote:

"That the superstructure of the walls was carried out in brick was apparent from the beginning. We found no bricks in position on the walls so that we cannot so far speak of actual brick construction, but everywhere alongside of the stone construction fallen bricks were in evidence, at parts in heaps. The only conclusion was that the bricks must have fallen from the walls below which they were found. . . ." "It is hardly likely that the fallen bricks can be from anywhere else than the wall adjacent to which they occur. . . ." "It was noted, however, that none of the bricks was in position on the wall itself."

It must be borne in mind that, when Mackenzie wrote these words, he had seen only the upper courses of the stone wall and he had yet to discover that it was not originally built merely as a foundation for brickwork, but was a construction complete in itself and earlier in date than the burnt brick. His reiterated opinion that the bricks must have fallen from the walls is important because it was based simply on observation of conditions as he found them; it could not be affected by speculations as to the origin and purpose of buildings of the existence of which he was at the time unaware.

It is evident that the burnt-brick debris outside the wall occurred at no great depth beneath the surface of the mound, but it was found before excavation inside the enclosure was begun and before Mackenzie had identified the three strata A, B, and C. There is, in consequence, nothing to show in which of these strata the external brick debris was found. Inside the enclosure, however, as Mackenzie more than once stresses, the fragments of burnt brick never occurred below the level of the later (plaster or concrete) floor, but always above it. They were, that is, found only in the dark A stratum, and seem to have been as characteristic of that stratum as the unbaked bricks were of the grey B stratum.

Inside the stone wall fragments of burnt brick were rare in the four 5-metre squares adjacent to the west side, *i.e.* in the four plots α , ϵ , ι , and ν in square N. 10, O. 11. Next to the south wall only two basketsful of small fragments were found in plot ξ , but "quantities" occurred in plots \omicron and π . Mackenzie observed, however, that in this strip alongside the south wall "at parts there was the appearance of confusion which indicated that bricks had been sought out for building purposes". Inside the north wall only a few fragments were found in plot β , but again "quantities" were met with in plots γ and δ , especially δ . As for the inner 5-metre squares, in plot ζ brick fragments "turned up in considerable quantities" and they occurred in only slightly smaller amounts in plots η and θ . In plot κ six bricks, unbroken, and lying as if they might have formed part of a pavement, were found during the digging of a trial pit early in the excavation (Pl. LXXI 3 and, *in situ*, in Pl. LXXI 4), but it was not later possible to put them into any systematic connection with the red-brick walls which subsequently emerged. No information is given regarding brick fragments found in plots λ and μ , but it is to be inferred that they were met with here also.

Mackenzie devotes a good deal of space to the burnt bricks in the early part of his diary, and

the following description of them summarises his various notes. They were made of ordinary local mud mixed with some kind of chopped straw and sometimes, but not always, with granite particles. They were baked a terra-cotta red, and must have been fired in a kiln; they were not, that is, ordinary mud bricks which had accidentally been burnt red in some conflagration. Their average size was roughly $36 \times 14 \times 7$ cm., but all these dimensions were subject to considerable variation. The length varied from 33 to 37 cm.; the width from 13 to 17, and in some cases to 19 cm., and the thickness from 5 to 8 cm. Comparing this description with that already given of the unburnt bricks, it will be seen that the two kinds differ only in the fact that one had been fired and the other had not.

CONSTRUCTIONS IN RED BRICK

These consist of the lower courses of part of a building inside the enclosure and the remains of two brick stairways built against the external face of the stone wall, one on the north side and the other on the south. Details of the brickwork of these are shown on the large plan at the end of the volume, which is copied direct from that which Middleton prepared at the time of the excavation. The dotted lines which indicate the probable position of walls which might be supposed to have existed, but which were not actually found, appear on the original drawing and have not been added by the present writer. For convenience of reference a reduced plan of the central building is given in Fig. 27. On this the writer has marked, in arabic numerals, the approximate positions from which the photographs of the remains of the building (Pls. LXXI–LXXIV) must have been taken. It should be noted at this point that one of these photographs (LXXIII 1), which gives a view along the east wall of the building, shows no gap in the wall at the place marked G on the plan, Fig. 27. The dotted lines here are probably to be accounted for by the fact that, when Middleton's plan was made, the balk of earth seen partly removed in the photograph covered that part of the wall.

The plan and the photographs give a good general idea of the building as it appeared when newly excavated. There are, however, a few vitally important details which Mackenzie noted in his diary and which must be put on record here. One of these is that some of the wall surfaces showed "a covering of plaster mixed with granite particles". The surfaces (*i.e.* vertical faces) on which this plaster was first observed are those marked P in Fig. 27. A little later the construction marked A in Fig. 27 was unearthed.

"This", Mackenzie said, "seems to stand somewhat by itself. It steps down south in the form of a step. Both the rectangular base and the step are enclosed in a facing of plaster with granite particles in it. . . . The arrangement looks like a podium for a ceremonial chair but its real character is not clear. The higher part of the 'podium' measures 85 centimetres east-west and 75 centimetres north-south. The step including the plaster has a projection of 25 centimetres. The 'podium' is 26 centimetres high, the step 10. The surface of the 'podium' which also has traces of plaster is 60–55 centimetres below the surface. The plaster at the base of the arrangement is continuous with that of the floor and carries on to that. This plaster floor is 90 centimetres from the surface here. It is well preserved in most parts of the plot [*i.e.* plot λ] but especially in the environment of the arrangement referred to above."

Still later, the faces marked X in Fig. 27 were observed to "have traces of plaster here and there like that noticed already".

No other details of the buildings are given in the diary; there were, perhaps, none worth noting,

but other references to the plaster floor have already been given in Chapter IX, p. 116. This floor seems to have extended over most of the area within the enclosure.

The remains of the red-brick constructions built respectively against the north and south external faces of the stone wall are shown on the plan and illustrated in Pl. LXXIV. They were found towards the end of the excavations during a final trenching round the outside of the wall. The following details of these constructions are extracted from the diary. That on the south measured 3·55 metres from east to west and 2·80 metres from north to south. The north wall (*i.e.* the wall next to the stone wall) was preserved for seven courses of bricks; the south wall for one course of bricks set lengthwise on edge; the east wall for the greater part of three courses with part of a fourth and fifth at the north end, while the west wall was intact for only one complete course with a few bricks of a fourth, fifth, and sixth course at the north-end. The construction against the north face of the stone wall was of much the same dimensions as that on the south, but it was more solidly built though not so well preserved. The outer (north) wall of the brickwork had disappeared entirely for two-thirds of its length and the part which remained had only two courses in position. Mackenzie suggested that part of this wall had been removed for re-use elsewhere. The west wall was preserved for four courses in the middle, five at the south end, but only three towards the north. The east wall was preserved for two courses, but no information is given about the south wall.

From an examination of the brickwork left *in situ* Mackenzie concluded that both these structures were the remains of stairways, the steps of that on the south going up parallel with the wall towards the east and those of that on the north ascending towards the west. The steps were formed of bricks laid flat with their length at right angles to the line of the step. To quote the diary once more:

“The bricks in position are 36 centimetres in length and, if the east wall of the north construction can itself be taken to have formed a step, the width of this and so presumably of all the others would have been about 32 centimetres. The height of the steps may have been about 17 centimetres to judge by the height of a step given by the two courses of bricks *in situ* in the north part of the east wall of the north construction. The bricks taken by themselves would not have given so much of a height for the steps were it not that they are embedded in a layer of mortar-concrete like that which forms an external covering of plaster still in position on the west wall of the arrangement. The bricks are actually not more than 6 or 7 centimetres in thickness.”

It is difficult to make out from the diary precisely what was the level of these stairways in relation to the floors which had been identified within the enclosure. The only entry on this rather important point reads:

“The discovery of the external constructions in baked bricks makes it clear that the external wall in stone was visible as far down as the base of the brickwork at the time at which this was built. That is to say the stone wall was visible for 1·70 metres from the present surface. But the floor of the central building within is more or less at the same level as the present surface at the part referred to. The steps up in the case of both structures were to enable one to get from the lower level to the higher. The outside surface lay 1·50–1·70 metres deeper than it does now whereas the internal floor was not more than about 0·7 metre beneath the present surface above it.”

This passage is not very clear but, as far as the present writer can make out, it means that the stairways were built from a level about a metre lower than the plaster floor of the central building within the stone wall. It is, in any case, obvious from the photographs in Pl. LXXIV that the

lowest course of the south stairway cannot have been far from the base of the enclosing wall and hence very close to the early (clay) floor.

Soon after the stairways were found Mackenzie wrote: "Both are entirely in the manner of the baked brick edifice within the wall of enclosure. All three belong together and represent the third and last period of habitation of the site." The final sentence in the diary reads: "These brick stairways put into systematic connection with the edifice in baked bricks inside the stone wall of enclosure are perhaps the most interesting feature that has come out in the course of these excavations."

As the diary comes so abruptly to an end it is not clear what picture Mackenzie had formed in his mind of the probable appearance of the site when the foundations of the red-brick building were laid. It might be inferred from one of the extracts quoted above that he regarded the discovery of the stairways as evidence that the external face of the enclosing wall must have been visible all round its perimeter at the time the stairways were built. He seems to have assumed, quite naturally, that the stairways would not have been constructed unless they had been necessary. It would follow that he must have envisaged the red-brick building as standing on a raised platform the sides of which were formed by the stone wall, this latter having by this time become a retaining, rather than an enclosing, wall. Manifestly in these conditions a stairway would have been required in order to gain easy access to the building. Unfortunately this picture—the picture of the stone wall with its external faces rising clear and unencumbered while the space within the enclosure was filled almost to the level of the top of the wall with deposit surmounted by a building—is not only at variance with other evidence provided by the excavation, but is against all probability. The excavation of the test-pits, as already pointed out in Chapter IX, showed that debris must have been deposited inside the wall and outside it at about the same rate; and when the accumulation had risen nearly to the top of the wall inside the enclosure it must have reached somewhere about the same level outside, at all events in the middle of the sides of the rectangle. There is other evidence to the same effect, namely, the debris of broken red brick which was found, in the early stages of the excavation, all round the outside of the stone wall just below the surface of the mound; it was found, that is to say, at a level only a few centimetres below the top of the wall. If the external face of this wall had been standing clear of debris at the time red brick came into use, these broken bricks would have been found near the *bottom* of the wall. That they were found almost level with the top must surely indicate that the ground outside must have been at that level when the broken bricks were deposited on it. All the available evidence shows that the wall must have been buried up to the level of the top of the B stratum when the red-brick building was begun, and that very little of the wall can at that time have been visible above the ground. No stairway would therefore have been necessary in order to gain access to the central building; it would have been quite easy to walk up the gentle slope of the mound which was already partly formed.

In spite of this the stairways indubitably were constructed, or, at least, their lower courses were laid, and they were built at the same time as the red-brick building; Mackenzie's opinion on this latter point cannot be called into question. The conclusion therefore seems inescapable that the accumulated debris was deliberately cleared from some part of the north and south external faces of the stone wall in order that (apparently unnecessary) stairways might be built against them. Strange as this conclusion may seem, it is nevertheless supported by the results of the excavation

of the two test-pits nearest to the north and south walls and close to the positions of the stairways. These pits, it will be recalled, showed, not the usual stratification, but a mass of debris containing burnt brick going right down to the early floor—precisely the result which might be expected if the ordinary stratified deposit had been cleared away from some part of the walls just about the time burnt brick came into use. Alternatively, the same effect would have been observed if these parts of the wall had periodically been cleared because of the existence of earlier constructions built against them.

The explanation of all this is, of course, a matter for conjecture, but to the present writer the evidence suggests that all the construction in burnt brick was a work of renovation, a rehabilitation and modernisation of something which had fallen into desuetude and neglect. The sequence of events may perhaps be reconstructed somewhat as follows: First of all there was the early occupation of the site, traces of which were found in the C stratum; then the stone wall of enclosure was built and within it a building of crude brick was erected. The use of mud brick probably points to an incursion of people from the north, for the natives of that part of the country would not normally use such a material for building; they would use grass. Since there was no opening in the wall, and the local residents could not be expected to clamber over it every time they went in or out of the enclosure, there probably was an earthen ramp or mud-brick stairway parallel to the wall leading up to the top and down again inside. The original layout, then, consisted of a building surrounded by a wall with some means of passing from one side of the wall to the other.

Obscure though the history and purpose of the building may be, it is clear from the evidence of the pottery and other objects that, within a comparatively short time after the wall was built, people were living both inside and outside the enclosure; the building had no perceptible effect on the life of the settlement. In course of time the stone wall became almost buried in dust and debris of occupation, and it may well be that the mud-brick building, whether it had at times been repaired or not, fell at last into ruins. Then, it may be supposed, a measure of restoration was determined upon, and the more durable burnt brick, instead of crude brick, was used for the work of reconstruction. No alteration in the composition or dimensions of the bricks hitherto used was necessary: all that was required was to fire them. It would seem, moreover, that tradition demanded a reconstruction along the lines of the original plan—the building must be surrounded by a wall and stairways must lead up to it. A wall of red brick was accordingly built on top of the stone wall, by this time almost buried, and stairways, although perhaps not actually necessary, were constructed against the stone wall in places especially cleared to receive them. Or, possibly, the stairways were built to replace earlier ones which had always been kept clear of debris for ceremonial reasons. This red-brick wall of enclosure is far from being merely hypothetical; there is strong evidence to show that it really existed, namely, the debris of red brick found all round the outside of the stone wall which Mackenzie was convinced had fallen from it.

The construction of the new building seems to have had even less effect on the history of the settlement than had that of the old. The same kind of pottery and other objects were found in the A stratum (formed after the erection of the red-brick building) as in the B stratum, showing that no change took place in the character of the occupation, and showing, too, that the life of the settlement soon flowed over the ruins of the new construction.

It is probable that this new building was soon destroyed; possibly, even, it was never completed. The appearance of the north and east walls (Pl. LXXII 2) suggests that they may have

been abandoned by the bricklayers at that stage of construction, and the portion of the wall seen in Pl. LXXII 3 and again in Pl. LXXII 4 is stepped down exactly in the manner of a wall partly built. It is significant, too, that no trace of the south and east walls of the building (shown dotted in the plan) was ever found, although the area in which these walls might have been expected to lie was excavated down to rock. The explanation of this might be that these walls were never built. It is true that, in the area where the south wall ought to have been, Mackenzie (p. 134 above) noted "the appearance of confusion which indicated that bricks had been sought out for building purposes", but if it be assumed that later plunderers completely removed the west and south walls it is strange that they should have left untouched other and equally accessible parts of the building.

Little was left, too, of the stairways, and the condition of the remains visible in the photographs in Pl. LXXIV could equally well be accounted for on the supposition that the constructions were never finished as on the assumption that they were completed and subsequently destroyed. Mackenzie himself was of the opinion that part of the north stairway had been removed for re-use elsewhere, but, if his view were correct, the missing portion must have been taken away soon after it was built. It was at such a level that it would quickly have been so deeply buried in debris as to escape the attention of later plunderers.

Still, though the evidence for an unfinished building is suggestive, it is not conclusive; the evidence for an early destruction by violence is, in the writer's view, stronger. The brick enclosing wall built on top of the stone wall seems to have been pushed bodily outwards; the mass of red-brick debris in the test-pits near the stairways suggests that these latter were torn up and the bricks piled in heaps, and the quantity of broken brick in the A stratum of the mound outside the stone wall may well be the result of bricks from the main building being scattered in all directions. The destruction may have been caused by raiders, but it was not the work of invaders who replaced the original occupants of the site. Life in the settlement, as already observed, was not visibly affected by the presence of the building. Quite possibly the inhabitants may for some reason have resented the existence of the building and may themselves have been responsible for its destruction. No unassailable conclusion as to the history and fate of the building can, in fact, be reached, but the question is in any case one of interest rather than importance.

We return for a moment to the solid ground of factual record before leaving it again for the atmosphere which envelops such uncertainties as the date and purpose of the building. The record presented is that of a traveller who visited Saqadi more than eighty years ago, E. de Pruyssenaere, who wrote:¹

"8th Juni 1863, Saqati. . . . Am Südfusse des mittleren Gipfels liegt ein kleiner Trümmerhaufen, bestehend aus kaum über den Boden heraussehenden Trümmern einer Umfassungsmauer aus unbehauenen Granitblöcken von etwa 30 Schritten Seitenlänge und einem innerhalb derselben gelegenen kleinen Hügel von Ziegelsteinen, die 21 cm. lang, 13 cm. breit und 5·2 cm. dick sind, aus granitischen Kies und Thon bestehen und kleine Strohalmstückchen, vielleicht auch Kuhmist, enthalten. Sie sind unvollkommen gebrannt, aber nichtsdestoweniger ziemlich dauerhaft. Einige davon enthalten ein einfaches Kreuz als Zeichen. Nichts daran lässt auf Ägyptische Ruinen schliessen; auch habe ich etwas weiteres weder selbst gesehen noch von den Eingeborenen erwähnen hören."

¹ Petermann's *Ergänzungsheft*, No. 51, 1877, Part 2: *Reisen und Forschungen im Gebiete des Blauen Nil*, by E. de Pruyssenaere.

The writer is indebted to Mr. O. G. S. Crawford for this reference.

The reference in this passage to some of the bricks being marked with "a simple cross" suggests that the red-brick walls at Saqadi may be the remains of a Christian church, and in support of this view it may be observed that the plan of the building—or as much of it as exists—resembles fairly closely the plans of some of the small Christian churches in the extreme north of the Sudan, such, for instance, as those at East Serra or Addendan.¹ It is true that burnt brick was never used in the construction of these northern churches and that the crude bricks there used measured as a rule 30×20×10 cm.,² dimensions different from those of the Saqadi bricks. These discrepancies would not in themselves invalidate a Christian date for the building at Saqadi, for it appears to be favoured by other evidence. The small iron crosses (p. 125 and Pl. LXIX) must certainly be Christian, and there is at least the possibility that the painted pottery (p. 121) may be Christian also. The small fragment of medieval Christian pottery (?) referred to on p. 122 cannot fairly be adduced as evidence because its provenance is unknown.

In the present writer's opinion, however, the evidence quoted, while some of it shows that the site may have been occupied at some time during the Christian period, is far from conclusive as regards the date of the building with which we are immediately concerned. It must not be forgotten that the floor of this building separated the B stratum from the A stratum; the whole of the A stratum must therefore have been deposited after the foundations of the building were laid, and all the objects in this stratum must be of later date than the building. Amongst these objects are some, *e.g.* archers' looses and single-barb iron arrow-heads, which have hitherto always been found on sites assigned to a date anterior to that of the introduction of Christianity into the Sudan. In the face of this evidence presented by the stratification and by the objects it is difficult to see how the building can be attributed to a date as late as the seventh century A.D. The evidence, rather, points to an earlier date, and this is supported by Mackenzie's description. As we have seen, he more than once refers to the coating of plaster with which parts of the brickwork were covered, a plaster which, from the details given, seems to have been of exactly the same kind as that found on Meroitic buildings at Meroë itself and elsewhere. The bricks, too, are of a size found rather on Meroitic than on Christian sites. The present writer, then, feels bound by the evidence to accept a Meroitic date for the building, but one which he would not venture to define more precisely than "fairly late Meroitic". The occupation of the site, however, continued for some time after the foundations of the building were laid and probably extended well into the Christian period. On the evidence of the finds the habitation period at Saqadi was contemporary with that of the village or mound site at Abu Geili, and covered the slow merging of the Meroitic into the Christian culture.

The evidence for a Christian occupation of the site cannot simply be ignored; the fact must be accepted that de Pruyssenaere really saw the sign of the cross on the bricks he examined at Saqadi. Equally it must be accepted that Mackenzie, for his part, observed no such sign; had he done so he would assuredly not have failed to record the fact. The discrepancy could be accounted for by supposing that the ruins (the "little mound of bricks") which de Pruyssenaere describes were those of a later building than that excavated by Mackenzie—a building which had completely disappeared during the half-century which elapsed before Mackenzie arrived on the scene. This hypothesis cannot be rejected out of hand because, as we have seen, there is considerable evidence

¹ *Churches in Lower Nubia*, by Geoffrey S. Mileham (Eckley B. Coxe Junior Expedition to Nubia, vol. II), Pls. 27, 30, and 34.

² *Op. cit.*, p. 8.

that the original building must have been at least partly demolished soon after it was built, even if it were completed; and it seems improbable that any part of it could still have been projecting above the surface of the mound in the middle of the nineteenth century. Yet the descriptions of the bricks given by de Pruysenaere and by Mackenzie tally so closely that it is difficult to believe that both men were not describing bricks from the same building. The only difference is that the earlier visitor gives a length of 21 cm. for a brick against Mackenzie's figure of 36 cm. Possibly de Pruysenaere measured a broken brick without knowing it was broken.

De Pruysenaere does not say how the sign of the cross was applied to the bricks upon which he observed it, whether it was impressed into the clay before firing or scratched on afterwards. The latter seems the more probable, because a device impressed or cut before firing might be expected to appear on all the bricks instead of on only a few. The sign of the cross, moreover, was not customarily found on the mud bricks used in the building of the Christian churches in the Northern Sudan and in Egypt. It seems likely, then, that the crosses recorded by de Pruysenaere may have been scratched on some of the bricks—whether from a later building or not—by Christian visitors to Saqadi at a time when the original red-brick building had already been destroyed. It may also have been casual pilgrims of this kind who dropped the small iron crosses to which reference has been made. That the site attracted visitors even in medieval times is shown by the presence of the few faceted carnelian beads.

As for the purpose of the buildings, both that in crude brick and its successor in burnt brick, nothing can with certainty be deduced from the evidence available. All that can be said is that, in spite of the fact that the plan of the red-brick building is more like that of a church or temple than anything else, nothing whatever was found to indicate that the building was used for any kind of religious purpose; the objects found in its remains were fragments of articles of purely domestic use. A conjecture which is as reasonable as any other is that the buildings may have been the residences or "palaces" of local rulers or governors, and it is not straining credulity to envisage such buildings as set in a walled courtyard.

The use of brick of any kind suggests some influence from the north, and possibly the governors may have come from that region. If they were imposed on the inhabitants against their will by outside authority, an outburst of violent resentment involving the destruction of the "palace" could not be regarded as improbable.

PART III

SITE 300 AT DAR EL MEK

CHAPTER XII

INTRODUCTION

DAR EL MEK, the second of the two sites excavated by Mackenzie, is situated on a saddle between two small peaks on the south-eastern spur of the Jebel Moya massif. The name does not appear on any official map, and there is nothing to show whether it was a name in local use or one adopted by Mr. Wellcome in the same way as he referred to the Abu Geili site as "Aloa".¹ For purposes of record Dar el Mek was known as Site 300 and its position in relation to Site 100—the main Jebel Moya site—is shown in the plan, Fig. 28. An enlargement of the portion within the rectangle *a* is given at *b*. These plans are based on the 1/20,000 map of Jebel Moya published by the Sudan Government Survey Department.

The records of the work done at Dar el Mek are similar to those surviving from the Saqadi excavation; they comprise Mackenzie's diary, his object register and object cards, a plan of the site, and a number of photographs taken by Barrett. The comments on the Saqadi records which appear on p. 111 apply *mutatis mutandis* to those dealing with Dar el Mek. They need not be repeated here, nor need further time be wasted in vain regrets that Mackenzie was unable to publish the results of his excavation himself. The descriptions which follow are based on a study of the diary and of the photographs, supplemented to a slight extent by recollections and notes of a visit which the present writer paid to the site in 1938.

The two peaks between which Site 300 lies are those on the extreme right, or south, of the spur shown in the photograph Pl. LXXV I. They are roughly on a line running north and south and are shown in greater detail in the photographs 2 and 3 in Pl. LXXV. The site itself occupies both slopes of the saddle between the peaks and is everywhere characterised by terrace walls of dry stonework. Here and there on the terraces the remains of both circular and rectangular buildings were visible on the surface before excavation began. Some of these evidences of human occupation may be seen in the photograph Pl. LXXV 2, while closer views of some of the terrace walls are given in Pl. LXXIX 1, 2. The walls are confined to the higher slopes of the ridge as the lower slopes are too steep for terracing to be practicable. The site is littered with granite boulders, most of which had fallen into their present positions before the settlement was founded; some of them are worked into the walls of the terraces and others were found to underlie the floors of dwellings.

¹ Since this was written Mr. O. G. S. Crawford has kindly pointed out that the name 'El Mek' appears on Cailliaud's map of the Sennar district just where Dar el Mek should be. The

name must therefore have been in use in the early nineteenth century.

As may be seen from the various photographs, the boulder-strewn slopes of the ridge are not devoid of vegetation. Besides patches of coarse grass and thorny scrub there are a few acacia and other trees and an occasional *tebeldi* or baobab. One of these latter was of exceptional size for such a situation, measuring as it did 13.65 metres (nearly 45 ft.) in circumference. It is shown in Pl. LXXVII 3 and is something of a landmark in several other photographs.

Excavation started early in March 1913 on one of the terraces on the eastern slope of the

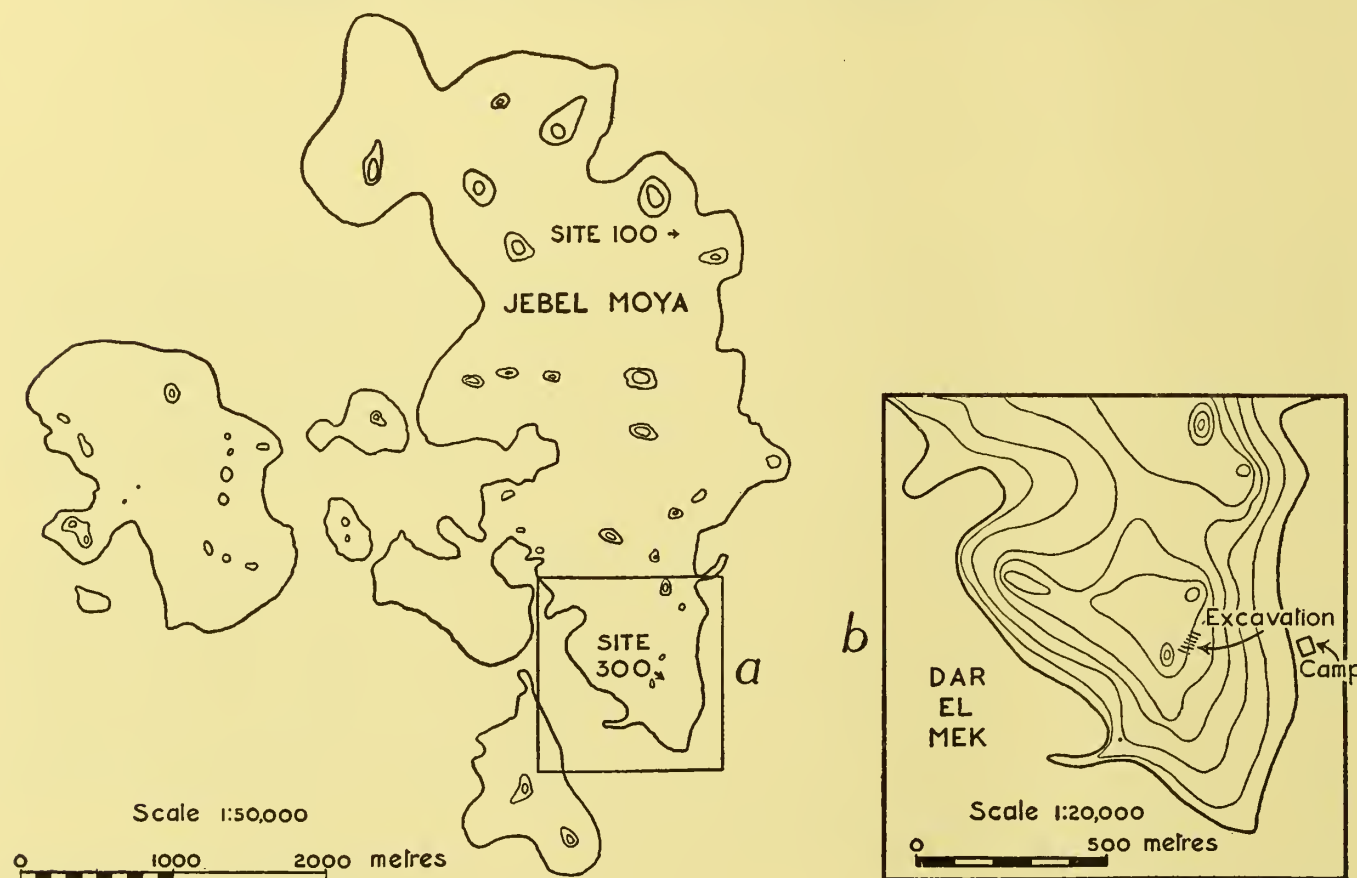


FIG. 28. Plan of Jebel Moya showing position of Dar el Mek

saddle, and, by the end of April, when work closed down for the season—and, as it turned out, for good—two terraces and the remains of twelve dwellings had been investigated. Mr. Wellcome's original intention had been to excavate the whole of the area covered by the floors and houses, but since Mackenzie never returned to the Sudan,¹ no further work on the site was ever carried out. It is unlikely that Mr. Wellcome intended to abandon Dar el Mek altogether, and his decision to transfer his operations to Abu Geili for the 1913–1914 season was probably justified, but it is to be regretted that the limited excavation was not properly wound up. It can be seen now that a few days spent in tying up the loose ends of the work already accomplished at Dar el Mek would have rendered the whole enterprise much more profitable.

¹ See *Jebel Moya*, vol. I, p. 6.

A plan of the site is given in Pl. LXXVI, the area actually excavated being shown stippled. It is based on a survey carried out by C. H. Walmsley,¹ but the original drawing, if it exists, has not been preserved amongst the records to which the present writer has had access. All that has been found is a number of photostatic copies of the drawing, of different sizes, and the plan in Pl. LXXVI has been redrawn from one of these by Mr. Norman Howard. The plan will be best understood if it is studied in conjunction with the photograph Pl. LXXVIII 1, which shows the area covered by the plan before excavations began. The "high rocks" and the "baobab" (the great *tebeldi*) marked at the bottom of the plan appear in the immediate foreground of the photograph; the group of figures in the photograph is standing to the right, or east, of Terrace 1, Area 2, and the site of Hut 1 is indicated by an arrow in the photograph. A view taken in the opposite direction, *i.e.* looking north, and showing the excavations in progress, is given in Pl. LXXX 1; this also will help in an understanding of the plan.

The photograph Pl. LXXVIII 2 is taken from almost the same point as Pl. LXXVIII 1 and shows the excavators' camp in the plain at the foot of the eastern slope of the ridge. (The camp arrangements, incidentally, were in the competent hands of Major Uribe.) The photograph also gives some idea of how steeply the flanks of the spur fall away from the terraced area and of the climb with which Mackenzie and his associates were faced as a preliminary to each day's work. Pl. LXXVII 1, 2 shows the appearance of the path they had daily to traverse and up which a daily supply of water for the workmen and all their tools and equipment—including a sifting-machine—had to be carried.

The system of squares which was adopted for purposes of recording on all the other sites opened up by Mr. Wellcome was obviously impracticable on a site such as Dar el Mek. Here a division into terraces was ready made and to hand, so Mackenzie started to number these and proposed to subdivide them into "areas" separated from each other by easily recognisable natural features. "A terrace", he wrote, "is marked out as such by means of the terrace wall below it; it is these walls that divide one terrace from another. Sometimes a terrace is sub-divided into two by a path-way or narrow lane going up through it. . . . The division is usually justified if the lane forms a through way to a terrace at a still higher level." In the event, this procedure was carried out only on Terrace 1, and although the boundaries of the three areas into which this terrace was divided were probably readily distinguishable on the ground, they were not such as to lend themselves to clear definition either on plan or photograph.

There is another set of symbols on the plan of which it may be well to give some explanation before beginning an account of the excavations themselves. These symbols refer to a series of hollows ground out in the upper surfaces of many of the more prominent boulders on the site, and they indicate the number and size (given by the legend at the bottom of the plan) of the hollows on the particular boulders shown. Some of these boulders are illustrated in Pl. LXXIX 3, 4, and 5.

Mackenzie, quite properly, devotes the opening pages of his diary to a description of the site before he began to excavate and of the surface indications of human occupation which he observed on his preliminary exploration. Such things as pottery and buildings will be considered later in their appropriate context, but this is as convenient a point as any to introduce Mackenzie's observations on what he calls stone mortars or grindstones. He writes:

¹ See *Jebel Moya*, vol. I, p. 261.

“It is difficult to find a satisfactory name [for these]. When such stones have the hollow quite shallow they resemble *querns*. At Gebel el Mek [an alternative name for Dar el Mek] these household utensils are so numerous that they meet one on the terraces at almost every step. They are almost invariably associated with the huts whether circular or rectangular but they occur in environments where such dwellings are not now discernible on the surface. . . . [In these cases] it is to be assumed that the houses were once there though now perished or invisible on the surface. . . . A good many of the mortars look as if in their natural condition they were stones of granite selected from the surface for the purpose. They bear no more signs of real quarrying than the much smaller stones usually made use of in the construction of the terraces and the house-foundations. It is the exception to find in the construction of the terraces and house-foundations stones so large as those used for the mortars.

“The hollowing out of the stone to form the mortar is usually not circular but of elongated elliptical shape and the deepening is the gradual outcome of long use. When the gradual process of hollowing out comes to cause a hole in the bottom the mortar becomes useless and is abandoned. Some of the mortar stones show the hollow on both sides but this is rather exceptional. . . .

“These mortars presuppose some sort of rubbing stone corresponding to our modern pestles for the actual work of pounding or grinding. These are of suitably small size and accordingly are not so easily seen on the surface. Some of these may have been actually taken away for modern use.

“The stone mortars though of considerable size were meant to be portable and could be removed from place to place.”

We may interrupt Mackenzie here to point out that the kind of mortar he has so far been discussing is that illustrated in Pl. LXXXVI A (a photograph taken in Wigmore Street soon after the objects had been brought to England). He continues:

“There is, however, another type of mortar or grinding stone which is a fixture in the granite rock. These are usually found adjacent to the houses but they often occur in areas where no houses are now discernible above ground. They are commonly in positions on the top of the rocks that ledge out in such a way as to be conveniently reached from adjoining dwellings. In these circumstances they can be regarded as having served a practical household purpose like the portable mortars.

“In other cases the position of these rock markings is so inconvenient that, as they now look, it is not so easy to suppose that their real purpose can have been the same. Some rock boulders have these mortar-like hollows on the top of them in a position occasionally so inaccessible that they can hardly be reached without considerable scrambling or the aid of a ladder. One such boulder of enormous size with such hollows on the top of it is to be seen on the north-east confines of the east slope of the saddle [*see* Pl. LXXIX]. The top of this boulder could hardly be conveniently reached from a dwelling unless this had an upper storey or a roof from which access could be had to the top of the boulder by stepping out on to it. It is quite common to have boulders of this kind worked into the construction of a house in the case of a steep site rich in boulders so that this possibility cannot be altogether left out of account.

“There is, however, an alternative possibility which it would perhaps be well not to leave quite out of account. These arrangements, in the case, at least, of the not easily accessible rock boulders, may have had a sacred character and function. The hollows may have been used to contain meat and drink offerings to offended or malignant divinities. The mortar-like hollows may have been used as receptacles for these offerings in the same way as ordinary plates and bowls are known to be used for the same purpose. The boulder on to which the divinity could then be called down to partake of the ritual feast through performance of the appropriate magical rites would in course of time come to be regarded as itself having a sacred character and this sacred character would survive as long as tradition tended to keep up the performance of the rites.

“There is another boulder to the north-west of Terrace 3 which may have been of the same character. This

has got a number of such markings on one of its vertical faces which looks west and it seems clear that this could not have been their original position. The explanation probably is that the boulder fell down bodily from a higher position above on the west side and that the surface with the mortar hollows, which must have been on the top when the boulder was in its original position, now got shifted so as to be the vertical west side.

“The remarkable point, however, was that the top of the boulder in its new position showed similar markings in the initial stage. It was clear that the boulder was used afresh for its original purpose. It may thus be here once more possible to find an explanation of this tenacity of purpose in ritual tradition which may have regarded this stone as sacred.”

Such, then, is Mackenzie's explanation of the hollows on boulders which are represented by symbols on the plan. While it may not be correct in detail, Mackenzie is probably right in attributing some sort of magico-religious significance to these formations. At the same time, the present writer cannot easily dismiss from his mind the recollection of the various occasions on which he has seen Sudanese children industriously rubbing holes in convenient rock surfaces. Yet who shall say whether or not they were imitating, consciously or unconsciously, some ancient ceremonial practice? As a final observation on leaving the subject, these hollows are not, in the writer's view, to be regarded as necessarily contemporaneous with the occupation represented by the terraces.

CHAPTER XIII

THE HABITATION REMAINS

IN this chapter an effort will be made to present the results of the excavations rather than to describe their actual progress. The material is, of course, entirely derived from Mackenzie's diary, although it is not presented in the order in which he set it down. It will be convenient at times to quote verbatim from the diary, and it is to be understood without further acknowledgment that all passages appearing within quotation marks are Mackenzie's own words.

Before work with pick and scraper began, "the first terraces to be attacked were numbered from 1 to 7 and placard pegs were set up to this effect". There is nothing now to show on what grounds these terraces were chosen, since they were apparently neither the highest nor the lowest to be distinguished on the eastern slope of the saddle. The photographs show other terraces above them, and below Terrace 1 "the surface drops suddenly to further terraces below". Possibly those selected looked the most promising. Only two of them in any case were excavated, and in the course of this work the remains of twelve dwellings were encountered; three of these were of rectangular, and the remainder of circular, construction. In the earlier pages of the diary the terms "house" and "hut" were used indiscriminately, but later on the designation "house" seems to be reserved for the rectangular buildings while those of circular form are simply "huts". This distinction has been retained.

The excavation began in Hut 1, but, contrary to Mackenzie's original intention, the other buildings were not cleared in the order in which they are numbered. They are, however, here described in numerical order; also, since the term "area" has been adopted as a topographical subdivision, it may as well be introduced at the outset. We begin, then, with Terrace 1, Area 1.

TERRACE 1, AREA 1

Area 1 lies at the eastern end of Terrace 1. The plan Pl. LXXVI shows a pathway, skirting the ruins of House 9, which forks on entering the terrace, one branch leading northward and upward to Terrace 3 and the other north-west to Terrace 4. The portion of Terrace 1 enclosed within the fork is Area 2; the area to the south is Area 3, and the area to the east of the path is that with which we are immediately concerned. On it stood the remains of Huts 1, 2, and 4 and House 3.

Like the rest of the site, Area 1 is encumbered with granite boulders, some of them visible before excavation began and others revealed as the soil covering them was removed. It is not clear from the diary how much of this area was cleared down to bed-rock, and it seems probable that excavation was confined to the vicinity of the buildings. The notes on stratification which follow refer specifically to the area delineated in Fig. 31. This area

"was everywhere covered with a surface stratum of grey-black earth which is mostly about 20 cm. thick and represents the post-habitation period of the site. Underneath this there emerged everywhere a pale ashy-grey stratum corresponding to the period or periods of habitation of the site. This pale ashy-hued stratum goes down to the rock between the boulders and elsewhere, and where it does not do this it rests upon a subsoil of ruddy, terracotta-hued earth. This red earth in its natural condition contains no pottery or other objects and is virgin

soil tinged red through the presence of iron. When it contains pottery it has been disturbed through levelling away or otherwise. . . . The habitation stratum of ashy-grey is usually 45 to 50 cm. thick and the pottery is much the same as the surface pottery.”

So much for the stratification; we turn now to the buildings.

Hut 1

The circular foundations of Hut 1 were visible on the surface for the whole of their circumference before excavations began. The soil was removed from the area inside the circle in thin layers and, when completely cleared, the remains of the wall were seen to consist of two courses, each consisting of two rings of fairly small undressed granite stones. The total height of the wall was 25 cm., its thickness about 30 cm., and the inside diameter of the circle was 3.70 metres. Within it, at a depth of 18 cm. below the surface of the dark supersoil, a clay floor of a pale colour was encountered, and, 18 cm. again below this (in the centre of the circle), yet another clay floor was found. These were clearly an earlier and a later floor of the same hut, but, while the upper one was more or less flat, the lower was dished as shown in the section, Fig. 29, which is copied from Mackenzie's sketch. At a point near the wall of the hut in the south-west quadrant of the circle a number of flat stones were embedded in the clay of the earlier floor, and these were “seen to be polished as if through the continual friction of feet”. Mackenzie therefore suggested that the doorway of the hut may possibly have been at this point. Near it, outside the hut, was a small circle of stones, 1.65 metres in diameter, enclosing an area paved with small flat stones which is illustrated in Pl. LXXX 2 and shown in the drawing. On this Mackenzie commented: “Its purpose is not clear, but the arrangement was common in association with the round dwellings for I have observed others in an analogous position elsewhere on the site.”

During the clearing of the hut a quantity of potsherds were found, but the only objects which could properly be regarded as floor deposits were a broken cooking-pot, two mace-heads, three stone rubbers, and a quantity of bones. All these may be seen *in situ* on the earlier floor in the photograph Pl. LXXX 2.

The Open-Air Kitchen

The area to the west and north-west of Hut 1 was covered with a jumble of loose boulders, some of which showed the beginnings of mortar hollows; to the west again of these was an area which was free from them. “Here red-tinged earth began to make its appearance at a depth of only about 30 or 35 cm. from the surface. This appeared cut out artificially on the west side and the pale grey earth characteristic of the habitation stratum here and in the region of Hut 1 continued down into the hollow thus formed.” Clearance of this area revealed a number of objects

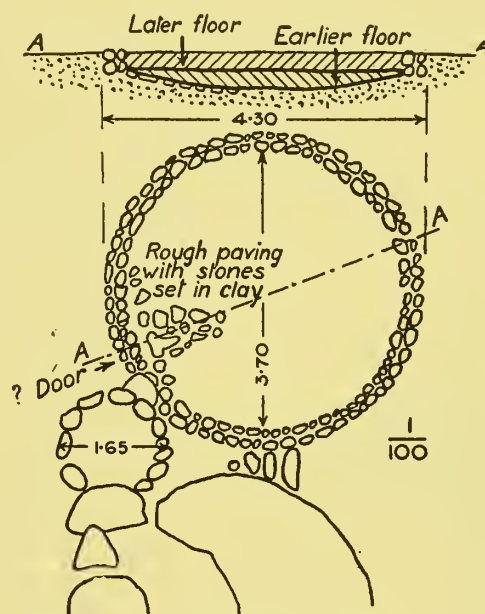


FIG. 29. Plan and section of Hut 1

in position as shown in the photograph Pl. LXXX 4. They comprised a cooking-pot (Fig. 40, 2) of coarse grey ware with a black fracture and roughly incised decoration; a smaller pot; a broken "brazier" (*see* Chap. XIV); some animal bones and a number of rubbing and pounding stones. Mackenzie suggested that the area might possibly have been an open-air summer kitchen belonging to one of the huts, probably Hut 1, which was only 2 metres away and belonged to the same habitation period.

Hut 2

The remains of this building were also visible on the surface but were not so well preserved as those of Hut 1. The foundation circle consisted, as before, of two rows or rings of stones, but

there was a gap on its southern edge, which was close to the edge of the terrace, where the rains of many successive summers, pouring across the terrace, had washed away the stones. The floor or floors were not very clearly defined, and on this account it was not possible to say with any certainty whether the potsherds found within the circle of stones belonged to the hut or not. This hut appears to have been of little interest as no dimensions, drawing, or photograph of it are extant.

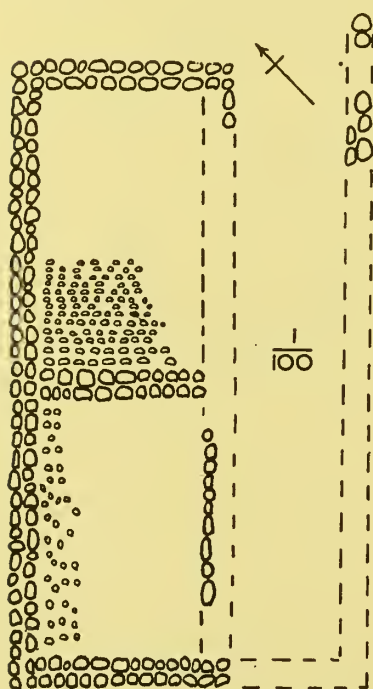


FIG. 30. Plan of House 3

House 3

This was a rectangular building the excavation of which was left until fairly late in the season. The remains which appeared on the surface were more or less as indicated in Fig. 30; they consisted, once again, of two rows of stones of which only one or two courses were preserved. In the vicinity of the house the rock cropped up at a depth which varied from 15 to 40 cm. below the surface, and where it lay deeper it was overlaid by a filling of earlier debris. In places it came up close to the surface, and here the foundations rested directly on the rock and were sunk into any gap which might occur between the outcrops.

The house appeared to consist of at least two rooms, rather narrow in proportion to their length, which would be an advantage on account of the short span of the roof beams. A little to the east were the remains of a wall, parallel to the house and sufficiently close to it to suggest a corridor along the side of the house. Not enough of this wall was left, however, to enable any definite connection with the house to be established, and it might well have been part of an enclosing wall. There was no indication of the position of the door or doors of the house.

"A partition wall separated the two rooms of the house and it was noticeable that on the north side of this was a layer of small stones in rows which at first sight suggested some sort of cobble paving. On more clearing, however, it was noticed that the stones projected up on edge, which they would not have done had they been paving, however rough. The explanation was that the partition wall had collapsed in one piece, falling bodily into the room on the north side and remaining there until we found it. The intervals between the rows of stone consisted of pale clay such as has elsewhere been noted as forming an intrinsic part of the wall construction.

At least twelve fallen courses of the wall could be counted and it was noticeable that the stones belonging to the lowest courses were larger than those belonging to the upper courses. The good quality of the clay mortar can be judged from the fact that the wall fell in one piece, not piecemeal. . . . The south room of the house showed inside its west wall what may have been a similar phenomenon of collapse, but in this case the different courses could no longer be distinguished."

The house had a pale clay floor which was presumably quite near the surface. Below it was an earlier floor or occupation level 60 cm. below the surface, and on it was found the round base of a large cooking-pot, the upper part of which had been cut off by the laying of the later floor. Besides this, potsherds were found within the walls of the house at every level from the surface downwards.

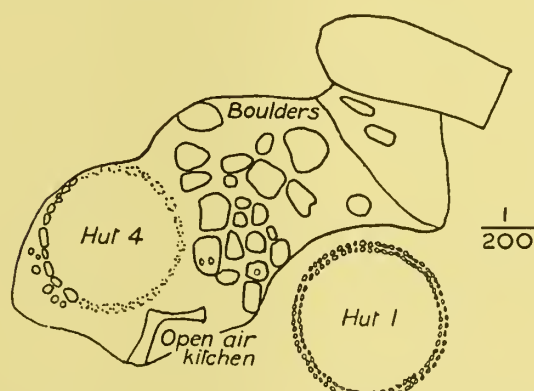


FIG. 31. Plan of Terrace 1, Area 1, showing relation of Hut 4 to Hut 1

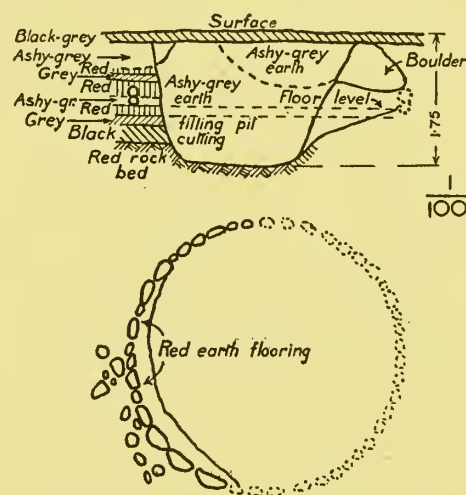


FIG. 32. Plan and section of Hut 4

Hut 4

Hut 4 was the next building to be excavated after the clearing of Hut 1. It was first encountered as part of a circle of stones at a depth of 65–70 cm. below the surface quite close to the open-air kitchen described above. Its position in relation to this latter and to Hut 1 is shown in Fig. 31. There had been considerable disturbance in this area and only about a third of the circumference of the circle remained in position. It consisted of a single row of stones laid on a bed of red earth and the floor of the hut had apparently been made of "a layer of the red earth spread all over as a sort of plaster". A similar plaster had been used as mortar between the stones and as a facing for the wall. The original floor remained only as a ledge on the inside of the wall; all the rest of the floor and the east side of the hut had been removed by the digging of a pit—possibly a grain pit—by later occupants of the site (*see* Pl. LXXX 3). The pit, which, as Mackenzie observed, might be regarded as an excavation made before his own, brought into view an interesting section which is indicated in Fig. 32 and described as follows:

"First [starting from the bottom] comes the red bed-rock and those who made the pit had sunk into this for some 25 cm. Above this came a layer 20–22 cm. thick of sooty-grey earth with potsherds in it presumably representing the first period of habitation on the site. This would be Period I.

"Above this is a thin stratum, about 10 cm. thick, of paler grey earth possibly to be associated with some

clay floor or plaster roof. It at any rate represents habitation deposit of the period immediately preceding that when the hut was built.

“Overlying this again is the stratum of red earth some 15 cm. thick which was probably spread out here preparatory to building the hut. The floor of the hut itself seems to have been a plaster of the same red earth. As said already, the same red earth was used as mortar for the wall foundations. . . .

“[Some] process of disturbance seems to have gone on after the hut was abandoned and forgotten [and before the pit was dug] for the section now shows a mixture of red and grey earth which goes up within 20 cm. of the surface. In the sketch ‘ashy-grey earth’ is indicated inside and outside the area occupied by the house and this is probably habitation deposit belonging to the period when the house was in use. Above this again is a thick stratum of red earth which evidently came to be where it was found after the hut had fallen into disuse. Then in succession as one comes to the surface are ‘grey earth’, ‘red earth’, ‘ashy-grey earth’, and, last of all, ‘black-grey earth’ next the surface which indicates the period of ruination and final abandonment of the spot.

“As apparent from the lower level of Hut 4, this is of earlier date than Hut 1. The top of the wall foundations is 70 cm. from the surface while Hut 1 has got these foundations visible all round. It may ultimately be possible to refer our Hut 4 to a Middle Period on the site which would be preceded by an earlier period represented by the black ashy stratum with potsherds in it referred to above. Hut 1 would in that case stand for the third or Latest Period on the site.”

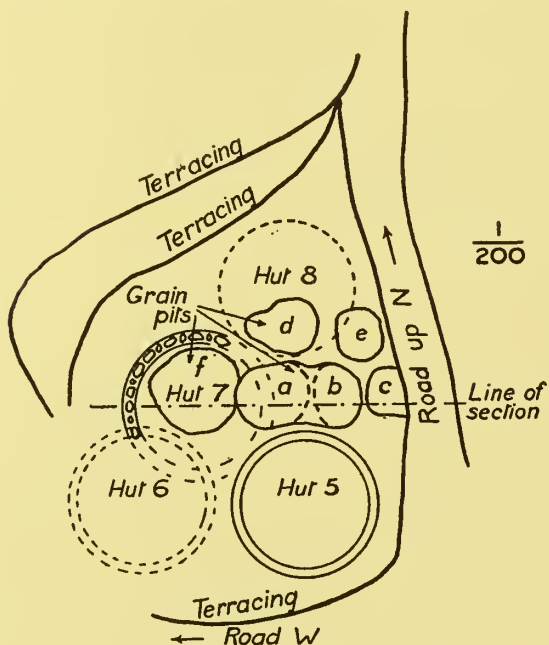


FIG. 33. Plan of Terrace 1, Area 2

stratum immediately above it. Any floor deposits in the interior of Hut 4 must have been removed when the pit was sunk into its interior, and in the pit was found a mixed deposit with pottery of the latest period going down to the rock. Some sherds which must almost certainly have been contemporary with the hut were, however, found outside the wall of the hut to the west in the stratum of the red earth on which the hut was built.

TERRACE 1, AREA 2

The position of Area 2 is indicated on the plan and has already been described on p. 148; on it was a cluster of huts numbered 5, 6, 7, and 8 as shown in the sketch, Fig. 33. The area was much disturbed by later digging and its original stratification was in consequence difficult to make out. There was, however, the usual dark surface stratum which had formed after the site was abandoned.

Huts 5 and 6

These huts are not described with any great detail in the diary. The foundation of Hut 5 was “just discernible on the surface and it had one course preserved more or less all round”. The

floor of the hut was about 15 cm. below ground surface and on it lay two stone mortars which were not visible from the surface. "Hut 6, which was not discernible from the surface, belongs to the same period as Hut 5, the uppermost preserved course, if it is such, was only preserved at parts, but the circle could be fairly well made out and the diameter may be more or less as indicated." The circle of Hut 6 was observed to overlies the remains of Hut 7.

Hut 7

Hut 7, since part of its wall lay beneath the foundations of Hut 6, was clearly earlier in date than Huts 5 and 6. Its wall had been largely destroyed by later digging of grain pits and only part of it remained in position. "These grain pits", Mackenzie observed, "have played havoc with the stratification of Area 2." The largest of them, pit *a*, as may be seen from the sketch, Fig. 34, cuts right across the eastern part of the wall of Hut 7, showing that it could not have belonged to the period of the hut itself. Another pit, *f*, was sunk in the middle of the floor of the hut.

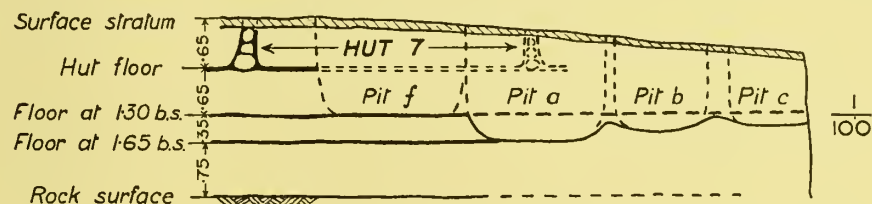


FIG. 34. Section across Terrace 1, Area 2

The floor, some 10 cm. thick, "was composed of a sort of red earth plaster which was so hard as to seem like concrete". [Elsewhere it was referred to as "excellent terra-cotta-coloured plaster-concrete".] "The wall was plastered on the inside with the same mortar which was continuous with that of the floor, there being a curve at the angle. . . . The exterior face of the wall and the floor outside had been plastered in the same way." Only a fringe of the floor remained on the north side of the hut, where it was about 70 cm. from the surface, but on the south side the floor was preserved for 80–90 cm. from the wall. At this point it was only some 30–40 cm. below the surface, partly owing to the slope of the ground and partly because the floor itself seemed to rise somewhat in this direction. In the section, Fig. 34, the floor at the west side is shown at 65 cm. below the surface.

The wall of the hut was best preserved on the west side and it presented some curious features. It consisted of three courses, each of a single row of stones decreasing in size with each successive course, so that the thickness of the wall diminished as its height increased. The thickness, including the plaster, was only 30 cm. at floor level, and by the top of the third course, 50 cm. from the floor, the wall was hardly more than 15 cm. thick. It seems, moreover, both from Mackenzie's sketch and from a remark about the "contraction of the external diameter", that the slope or batter of the wall was greater on the outside than on the inside. We cannot, then, but agree with Mackenzie when he observes: "It is thus difficult to say how the construction was carried out still higher up." He himself hazarded the suggestion that the hut may have been domed. The top of the wall at its highest point was only about 15 cm. below the surface and was covered only by the dark surface stratum.

It will be seen that, in the section Fig. 34, other floors are indicated at 1.30 metres and 1.65 metres below the surface respectively. These were of pale-coloured mud or clay as distinct from the red, concrete-like floor of hut 7.

"The floor at 1.60 m. down seems to be only 5 cm. thick at points where it was possible to get some sort of measurement, while the higher floor at 1.30 m. down seemed to be quite 10 cm. in thickness.

"But the floor levels as the excavation proceeded downwards did not cease here. The streaks they formed in the deposit could be discerned all the way down at intervals until the rock boulders were reached. At some 10–20 cm. above the rock-bed was an almost white ashy stratum which apparently overlay one of these floors. The boulders at this point were 2.25 metres down."

The deposits between the floor at 1.30 metres and the floor of the hut "consisted of accumulated debris of darker hue than those above. There were fragments of vessels of thick section and apparently of large size, and along with them there occurred bits of coarse plaster burnt to a sooty hue. The deposits were impregnated with a mixture of the same sort of red earth that formed the substance of the floor above." This layer of deposit was penetrated by grain-pit *f* which reached the floor at 1.30 m. b.s. This floor was uniformly well preserved all over the area covered by the western part of the hut walls but was, in its turn, cut into by another and larger pit, *a*, which went down as far as the floor at 1.60 m. b.s. "The 30 cm. between the floor at 1.30 m. b.s. and the bottom of the pit at 1.60 m. b.s. was thickly packed with fragments of sooty brown-black plaster with which were mixed some fragments of terra-cotta red plaster resembling that used in the construction of Hut 7." This dark-coloured plaster had all apparently suffered from the action of fire. Large fragments of it were found lying about the floor of the pit, and some of them could be seen to have been in layers. At least three layers could be made out in some cases, but it could not be determined with certainty whether the layers were due to successive falls of plaster or whether the plaster had been in layers in its original position. "There was no doubt, however, that the plaster as a whole had originally been elsewhere and its presence where it was found is most easily accounted for on the supposition that it fell from above."

It may be interpolated here that, since this carbonised plaster was found on the floor of the pit, it must have fallen there after the pit was dug, and must therefore be later in date than Hut 7. In the section cut by the pit on the west side through the deposit between the two floors at 1.30 and 1.60 m. b.s. "some of the fragments of plaster were of a bright terra-cotta hue like that characteristic of Hut 7 while others were of a much deeper ruddy brown hue as if they also had suffered somewhat from fire".

"Alongside of all this carbonised plaster in the east direction was what looked like a lining of plaster entirely different in character. It was of a pale clayey hue and, in contrast with the other, it seemed in position. It was probably a sort of lining to the grain pit . . . irregular in thickness, but most of it was hardly more than 1 or 2 cm. in section."

This plaster was similar to that which occurred on the floor and on the wall remains of Hut 1 and other huts of the latest period. The inference is that the pit was contemporary with these huts, and that the burnt plaster may well be evidence of some catastrophe which overtook the settlement, and (since the pit was never cleared) probably terminated the occupation for ever. This inference was not, however, specifically formulated by Mackenzie himself.

Hut 8

Hut 8, another round dwelling, lay to the north-east of Hut 7 and so close to it that the two may originally have touched. Little of Hut 8 remained, and the part which was preserved was not nearly in such good condition as the western part of the wall of Hut 7; only six stones of one course of the wall were found in position. The floor of the hut had been broken up by the excavation of grain-pits *d* and *e*, but part of it was preserved on the west side at a depth of 50 cm. from the surface. It was composed of the same red plaster as the floors of Hut 7 and Hut 4, and similar plaster was found adhering to the few stones of the wall still in position. The method of construction was obviously the same as that used in Hut 7, and there could be no doubt that the two huts were contemporary, and that both belonged to the same early period as Hut 4. The floor of Hut 8 was, it is true, at a somewhat higher level than that of Hut 7, but this was probably because it was situated a little higher up the slope.

The pottery and other objects from pits *d* and *e* were, like the deposits from all the other pits, a mixed lot quite useless for establishing a ceramic sequence for the site; but the fragments of a large store-jar (*see below*, p. 165) found on the east side of pit *d* seemed to be in position in the stratum cut through by the pit. "The fragments were found at a level which corresponded to the floor at 1.30 metres below the surface. The floor was not intact where the fragments were actually found, but it existed just alongside on the south side only an inch or two away. The larger fragments partially lay on some of the flooring which bordered on the grain pit."

TERRACE 1, AREA 3

Area 3 on Terrace 1 is separated from Area 2 by a pathway which does not appear very prominently on the plan. Mackenzie considered it to be "relatively lacking in interest" and the only building remains recorded from it were those of House 9. A pit a short distance to the west of the house may possibly have belonged to it. The plan shows the corner of another rectangular building close to the pit, but no mention of this is to be found in the diary.

House 9

House 9, like House 3 in Area 1, was a rectangular building consisting of two rooms. It was orientated with its long axis roughly north-south and its eastern side was near to the terrace wall. The remains visible on the surface were as indicated in the sketch, Fig. 35. The walls had suffered not only from the normal process of denudation but also from the action of water; there was a torrent bed close to the south end of the house and the south-east corner had completely disappeared. Most of the east wall had also in course of time been washed away over the terrace. The walls which remained were preserved for only one course with here and there a few stones of a second course. At the north end of the house was a roughly paved area forming a kind of causeway, and it is possible that this marked the position of the door of the house. No doorway of any

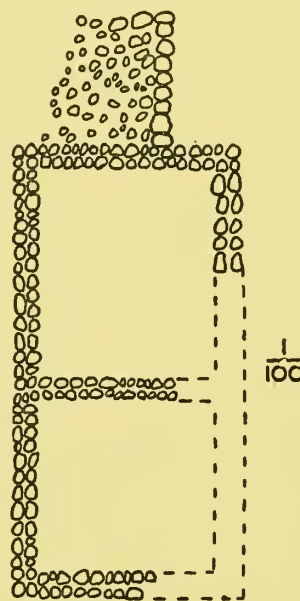


FIG. 35. Plan of House 9

kind was, however, discovered, though such would in any case hardly be apparent in the lowest foundation course of any building.

The floor level of the house on the west side was practically the same as the modern surface and was, of course, above the surface on the east side where the walls and the soil beneath them had been washed away. The floor itself, as far as it could be traced, was apparently composed of the same pale-coloured plaster as were the floors of Huts 1 and 2 and House 3, and the house was considered to belong to the same late period as these.

No details of the stratification of the area are given. There were, naturally, no floor deposits in House 9 because the floor level was either the same as the modern surface or above it, but potsherds were found in a stratum below the house—of unspecified nature and colour—which was some 35–45 cm. thick.

CHARACTERISTICS OF THE BUILDINGS ON TERRACE 1

By the time all the dwellings on Terrace 1 had been cleared Mackenzie was confirmed in his view (*supra*, p. 152) that they belonged to two different periods and that the buildings of the later could be distinguished from those of the earlier by certain definite characteristics. Those of the latest period on the site, of which the remains were almost always visible on the surface, invariably had two rows of stones in the thickness of the walls whether the huts were round or rectangular. Also, whenever it was possible to detect the presence of a mortar binding, it was always a pale clay and the floors of the huts were formed of the same material. The walls were seldom more than 30–35 cm. thick, and it therefore seemed unlikely that they were carried to their full height in stone.

The earlier buildings, *i.e.* Huts 4, 7, and 8, had only one row of stones in the thickness of the walls and these were thickly coated with a red, concrete-like plaster which was also used for the floors. Their remains, which were not visible on the modern surface and were only encountered at some distance below it, had been disturbed by the digging of pits, presumably by the inhabitants of the huts of the latest period.

TERRACE 2

Terrace 2 was situated at the extreme south end of the east slope of the saddle on which the excavations were carried out. It was bounded on the west by the retaining wall of Terrace 4, which here rose in a double tier, and on the east by its own retaining wall which incorporated two masses of boulders in its construction. At the south end was the large *tebeldi* tree which has already been mentioned and which itself rose against a mass of enormous granite boulders. These in turn formed part of the base of the more southerly of the two peaks between which the saddle lay.

Neither plan nor photographs give a very clear idea of the northern boundary of the terrace, but Mackenzie described it as follows:

“The terrace is flanked on its north side by fractured granite boulders which look like a natural approach to this part of the site. The pathway to the terrace at the time when it was inhabited probably passed between these boulders. They not only flanked the terrace on the north side but protected it in this direction. The terrace wall is worked in between these boulders on its way south in the direction of the *tebeldi* tree.

“Hut 10 nestles against this mass of broken boulders and it is the first house one would have met on the left or east hand side as one entered the terrace. Leaving it behind one would proceed south along the east edge of

the narrow terrace, passing other houses on the right hand side, until one reached the shade of the *tebeldi* tree. This would accordingly have been one of the amenities of the terrace in the period of habitation of the site. Its size suggests very great age and it may have been already there before the earliest settlement at Dar el Mek."

Hut 10

This hut, the position of which has just been described, was yet another round hut of the latest period. The two rows of stones which formed the foundation of its circular wall could be traced out on the surface for about two-thirds of its circumference, but they were no longer in position on the west side, as may be seen in Fig. 36. Only one course of masonry was preserved and the floor of the hut was therefore either at ground level or not far below it according to the slope of the ground.

The floor was fairly well preserved and could be traced all over the area within the wall except on the west side. It was not, however, made of the usual pale-coloured clay but of a red plaster which in colour resembled that used in the early huts, though it was not at all of the same concrete-like consistency. It may, perhaps, have been prepared in a different manner or the red colour may possibly have been due to accidental burning. The floor was slightly dished in the centre in a similar manner to the floor of Hut 1 and sloped a little to the west.

Below this floor, at a distance of 10 cm., was found another plaster floor of a "ruddier hue" than the upper one. It was at first thought to be an earlier floor of the same hut, but was later observed to extend underneath the foundation of the wall on the east side and may therefore have belonged to an earlier building. A number of potsherds were found between the two floors and a single large sherd (*see* p. 167 and Fig. 40, 3) immediately underneath the earlier floor. The excavation does not seem to have been continued below this level, possibly owing to lack of time.

Hut 10 at the time of excavation was noteworthy because Mr. Wellcome himself, on his first visit to the site, had found on its floor the remains of a large pot—probably a storage jar—*in situ*. Also within the hut circle were found six stone rubbers—natural pebbles used for rubbing—and fragments of two stone mortars. All of them were visible on the surface and showed signs of weathering on their exposed surfaces. These were regarded as belonging to the hut but were not claimed to be *in situ* because they were slightly above the floor of the hut and not actually on it. "The floor was so near the surface that one could not be quite certain that the objects were on the same spot they occupied when their owners used them for the last time. . . . That there was some sort of accidental or intentional disturbance was indicated by the fact that the missing parts of the mortars were nowhere about."

Hut 11

Hut 11 was the most southerly of the buildings excavated at Dar el Mek. Though not visible on the surface, its walls rose to within 1 or 2 cm. of it and, as the circle came gradually into view, Mackenzie was at first puzzled to find that it consisted of only a single row of stones instead of the

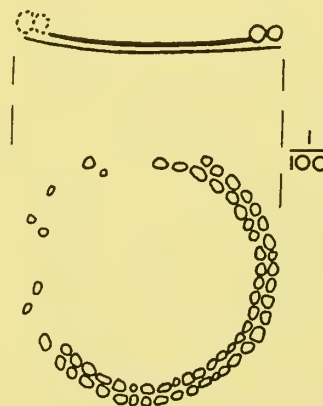


FIG. 36. Plan and section of Hut 10

double row which experience had taught him to expect so near ground level. Further excavation, however, revealed a building of the early type in a much better state of preservation than either Hut 7 or Hut 4. "Not only was the circle of the wall complete all round but the wall itself was preserved for a height of from 1.15 to 1.25 and 1.30 metres from the floor. The floor itself was intact all over and this time there was no grain pit to confuse the deposits and disturb the remains." The walls and floor were covered with the, by now, familiar concrete-like plaster, though of a paler colour than in Hut 7, but the exposure to the damp of many rainy seasons had caused the plaster to flake away from the upper part of the wall and it was preserved only for a height of 40 to 60 cm. from the floor. The appearance of the hut is shown in Pl. LXXXI 2, 3, and a sketch showing the construction in Fig. 37. The wall was nowhere more than 30–35 cm. thick, while at the top it was only about 25 cm. thick, and there was no clue as to how the construction was finished above.

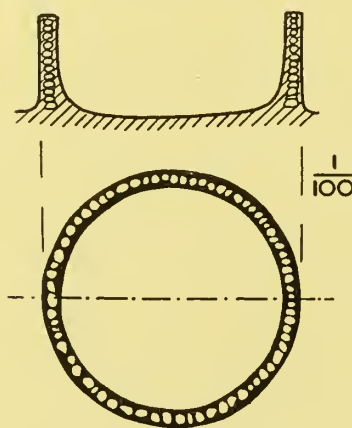


FIG. 37. Plan and section of Hut 11

The problem of construction was not the only one presented by the hut; there was also the problem of its use. Mackenzie's workmen were not slow to point out that the building nowhere showed any sign of a doorway, and the Egyptian foreman went so far as to assert that it was not a dwelling at all but a grain store or granary. Mackenzie countered with another suggestion.

"There is", he wrote, "another possibility. As the walls of the hut came up practically to the surface it is possible that the last inhabitants of the site were aware of its existence. If so, some family on the spot such as the occupants of Hut 10 may have made use of the convenient chamber for their own purposes. This suggestion seems borne out by the fact that, though the floor of the room was as much as 1.20 m. from the surface and entirely intact,

there were no floor deposits. So much was this so that there was not a single object that could be regarded as belonging to the furniture of the room when it was in use. This seemed all the more remarkable and significant when it is remembered that even Hut 1, whose floor was only some 35 cm. from the surface, yielded some objects that could be regarded as in their true context where they were found. The pottery which was found was of a very mixed character and it was entirely fragmentary. The majority of the incised sherds belonged clearly to the latest period of habitation on the site and the fragments with the mat impressions were the order of the day."

At this point the present writer must obtrude his personal opinion that, while Mackenzie may well have been right in suggesting that Hut 11 was reused in later times, he has evaded the point at issue, namely, was the hut originally a dwelling or not? If it were, then surely it must have had a doorway. We are not, as already observed, puzzled if we fail to find any sign of an entrance in the lowest foundation course of a building, but we do expect to find a gap in a house wall which is nearly shoulder high. If, then, we are to accept a suggestion that Hut 11 was a house later reused as a grain store, we may reasonably demand some evidence that the original doorway had been filled in and plastered over by later comers. Lacking this evidence—and such an alteration could hardly pass unnoticed—we can only conclude that a doorway of the usual kind never existed, and we are left in some doubt as to the purpose, not only of Hut 11, but also of Huts 4, 7, and 8, which belong to the same period.

Returning to the record, five grain-pits were exposed in the area to the south of Hut 11, but

these were assumed to be later than the period to which the hut belonged. To the west and south-west the excavations brought out a mass of boulders, and in this difficult terrain there were no indications of building remains.

House 12

House 12 lay a little to the north-west of Hut 11 and was a rectangular building, consisting of a single chamber, built up against the wall of Terrace 4 so that this wall formed the fourth (west) side of the house. It is shown in plan in Fig. 38 and illustrated in Pl. LXXXI. In this plate, photograph 1 shows workmen clearing the house (and, incidentally, shows a sifting-machine under the *tebeli* tree in the background); photograph 2 shows both Hut 11 and House 12, and photograph 4 shows House 12 at an advanced stage of excavation. Although the remains of the two buildings are shown in the same photograph, it is to be remembered that House 12 was occupied at a later date than Hut 11, if the latter were ever occupied at all.

Having two rows of stones in the walls, House 12 was assumed to belong to the latest habitation period, and the floor deposits, in Mackenzie's view, entirely confirmed this conclusion. The house had apparently continued in use for a considerable time because the original floor was found at a depth of 85 cm. below the surface on the west side, though on the east, owing to the slope of the ground surface, this same floor was only some 15–20 cm. below it. About 25 cm. above this floor, and close to the west (terrace) wall, were the remains of what may have been a later floor or, more probably, a bench or ledge. On it were found the remains of a large pot (Fig. 40, 1) of red ware with the middle third of the fracture black. Nearby, on the original floor, were found the fragments of another pot so like the first that the two might have been made by the same hand. This suggests that they were contemporary and that the one at the higher level was on a ledge rather than on a later floor. Also on the original (early) floor was an almost complete "brazier" of the kind found on the floor of the Open-air Kitchen.

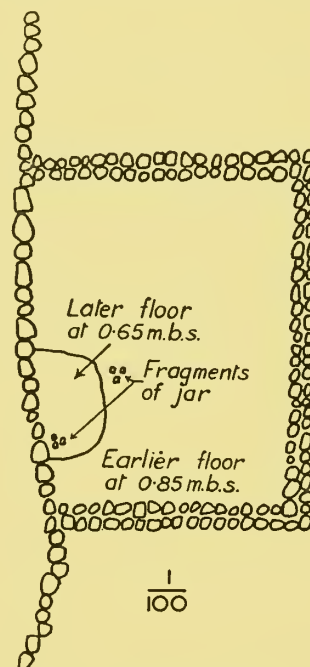


FIG. 38. Plan of House 12

OTHER EXCAVATIONS

With a note of the dimensions of the brazier found on the floor of Hut 12 the diary comes abruptly to an end, but there is evidence of further excavation carried out on or near the site and not mentioned in the text. There are photographs, unnumbered and without captions, of three small excavations of what appear to be linear stone structures apparently on the plain at the foot of the Dar el Mek ridge. There are also photographs, again unidentifiable, which appear to show the excavation of a rectangular structure—not House 12—abutting on a terrace wall. This might be the structure shown on the plan immediately to the west of Hut 4 on Terrace 1, and which, since it is drawn in full lines, was presumably visible on the surface. It is curious that Mackenzie

should have made no reference to this. Further, there are three structures, probably walls, shown dotted on the plan, to which again no reference is made, but which are hardly likely to have been of any interest or importance.

Besides these evidences of unrecorded excavation there are three lots of pottery and a number of small objects which, in the object register, are recorded as coming from one or other of a series of "reservoirs" numbered from 1 to 5. Although these cannot be identified with certainty, the present writer feels confident that they were rock cisterns of the kind which he himself has seen on the rocks above the saddle at Dar el Mek. Such cisterns or reservoirs, formed by the natural faulting or weathering of the rock, occur at various places in the Sudan usually associated with traces of near-by occupation in ancient times; some were found on the southern ridge overlooking Site 100 at Jebel Moya.¹ The photograph Pl. LXXXII 3, though without a caption, undoubtedly shows one of these Dar el Mek cisterns after the water had been baled out of it; one of the figures (in the dark waistcoat) is standing actually on the bottom of the cistern. It is fairly certain, also, that the photograph Pl. LXXXII 4 shows work in progress in the clearing of two other rock cisterns, one in the cleft below the sheer-legs and the other in the middle foreground of the photograph. The precise identification of Reservoirs 1 to 5 is not a matter of importance, but in the object register (*not* the diary) Reservoirs 4 and 5 are said to be "west of the Dar el Mek saddle".

The other photographs in Pl. LXXXII, though not precisely identifiable, give some idea of the not unattractive vistas to be obtained from selected points on the Dar el Mek ridge.

¹ *Jebel Moya*, vol. I, p. 13.

CHAPTER XIV

THE POTTERY

THE preceding pages will have shown that, in dealing with the pottery from Dar el Mek, we are once again confronted with potsherds rather than with pots. Even the vessels of which the fragments were occasionally found *in situ* on the floors of huts were incomplete, and only in rare cases has it been possible to recover the shapes of the pots.

The sherds were packed in palm-leaf baskets in the same way as those from Abu Geili and Saqadi, and forty-four of these survived for examination in 1947. An unknown number had had to be discarded either because the baskets themselves had disintegrated or because the labels had been rendered illegible by the action of water during the war.¹ A glance into any of the baskets was enough to show that the Dar el Mek pottery was in the main quite different from anything met with on any of the other sites excavated by Mr. Wellcome, though it could be seen that certain sherds were of types which had been found in small quantities at Abu Geili on or near the Fung surface.

The sherds were mostly of coarse ware and appeared to be the remains of large hand-made vessels such as cooking-pots or storage jars of one kind or another. Some of the fragments were of exceptional thickness and the pots in some cases must have been of quite unusual size. Conversely, there was a marked absence of finer wares and of such forms as beakers or small bowls. It seems likely that, for the purposes for which such small vessels would normally be used, the people who lived at Dar el Mek used the calabash as so many of the natives of the Sudan still do to-day.

It may be recalled that Mackenzie had distinguished three periods in the occupation of the site: a late period represented by the building remains on or near the surface; a middle period corresponding to such huts (or granaries?) as 4, 7, and 11, and an early period represented by the potsherds in still lower strata. These potsherds, and those from the floors of huts, were, of course, separately packed and labelled, but they formed a comparatively small proportion of the volume available for examination. The larger proportion was from the general excavation, and although the sherds were in baskets marked with the appropriate terrace and area number—and even a precise locality in the area—the best that could be done on the site in the way of stratification was to divide them into two layers, A and B. The former was a surface layer which apparently varied in thickness according to locality. On Terrace 1 it was 30 cm. thick in Area 1, 20 cm. thick in Area 2, and 80 cm. thick in Area 3; on Terrace 2 it was from 25 cm. to 40 cm. thick. The B layer comprised everything below this A stratum. Many of the B collections, therefore, contained an assortment of sherds representative of all periods, and would not in themselves have been much help in an attempt to work out a pottery sequence. Fortunately, Mackenzie made fairly full notes on the pottery throughout his diary, and indicated which types were, in his view, to be assigned to the different periods.

The pottery of the latest period was, of course, the easiest to identify, since it was the pottery

¹ See p. 120.

lying about on the surface and in the upper layer of the deposit. The most common of the wares at this time was a somewhat crude, fairly thick, red ware, decorated with a single band of roughly incised cross-hatching such as may be seen on the fragments Nos. 1 to 5 in the photograph Pl. LXXXIII A. It will save a good deal of repetition if this kind of pottery is in future referred to as type 1. When this cross-hatched band occurred on large pots—and occasionally on smaller ones—it was embellished with a festoon of variant form as shown in Fig. 39. The fragments here illustrated are very thick and it is quite impossible even to guess at the shape of the pots of which they once formed part. Fragment *a* is 21 mm. thick, *b* is 32 mm. thick, and *c* is 15 mm. thick, and the fracture in each case is black for most of the thickness. *a* and *b* are burnt bright red for 2–3 mm. from the surface on both sides, but *c* is burnt red on the outside only. The triangle at the bottom of the festoon on *a* was not incised but was made by pressing the corner of some square

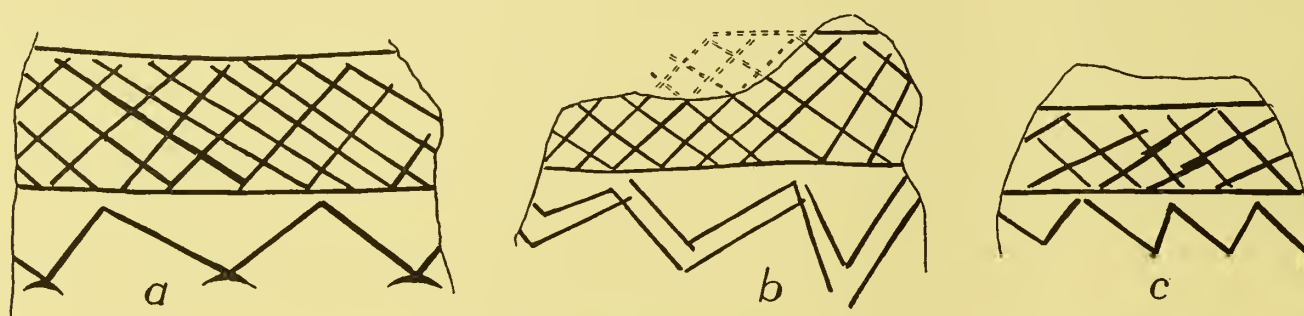


FIG. 39. Incised designs on large pots. 1:2

object into the soft clay. This fragment came from Terrace 2 south, but fragments exactly similar were found in Hut 10 between 0 and 15 cm. from the surface. The fragments *b* and *c* are from the A stratum of Terrace 1, Area 1. This “chequer band”, as Mackenzie called it, was probably applied to vessels of different forms, but the only pots which could be reconstructed sufficiently to recover their shapes were that from the floor of House 12 (p. 159), and one of those from the Open-air Kitchen (p. 149). As may be judged from the drawings, Fig. 40, 1 and 2, they exhibit neither elegance of form nor refinement of craftsmanship. The sherd drawn in Fig. 43*a* also illustrates the clumsiness of this latest pottery.

Mackenzie frequently refers to this type of decoration, and typical comments are: “All these decorative motives may now be taken to be peculiarly characteristic of the last period on the site. They occur so often that they emerge on every lot of pottery brought out.” Or again: “This chequer band is so characteristic of this era that one would be surprised if it did not turn up.”

The substance of this pottery as shown by the fracture was almost invariably black, but it was often burnt red on both sides to a depth which depended on the firing. Sometimes the pots were burnt red on the outside only, the inside being black. Often the ware had a surface slip, the effect of which was to tone down the colour from the bright red (due to firing) to a nondescript light red or red-buff or grey-brown or even grey-buff. Some sherds showed a red-polished zone above the decorative band, the polish being additional to any slip; this was probably a survival from an earlier period, as will be seen later.

Another type of pottery belonging to the latest period was a thin, hard ware with mat-impressions on the outside, burnt red but with a black streak in the middle of the fracture. A few

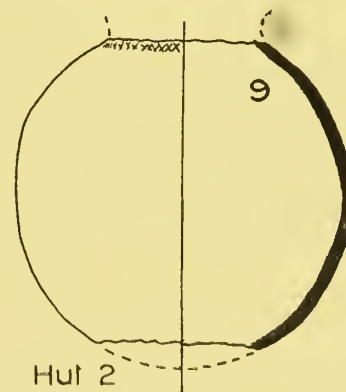
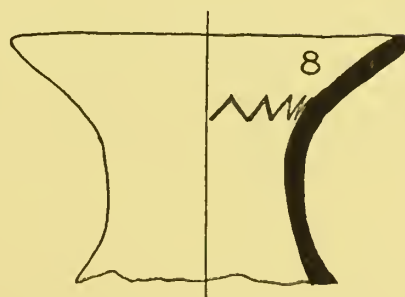
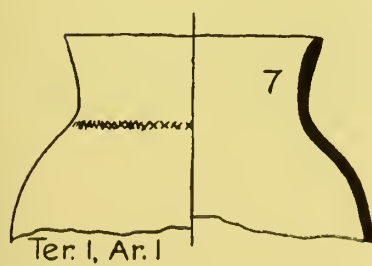
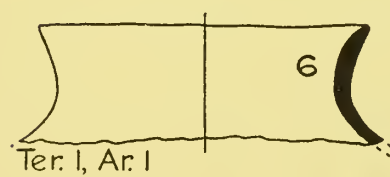
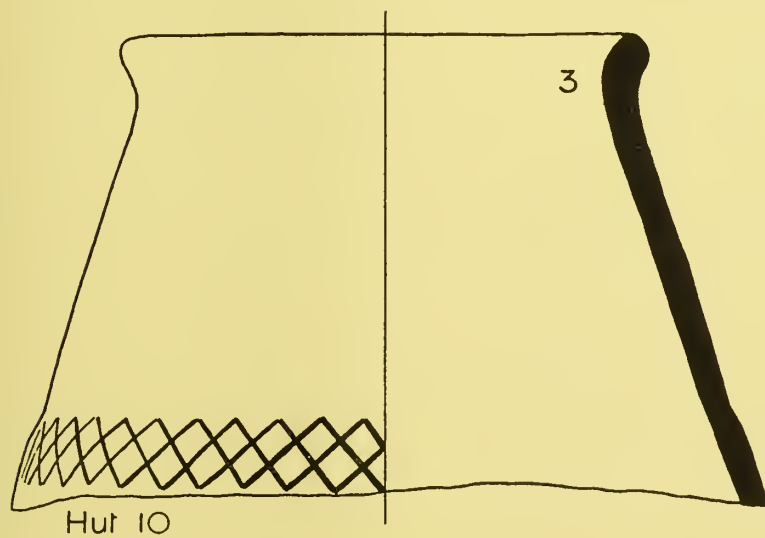
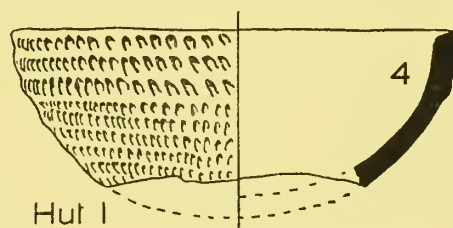
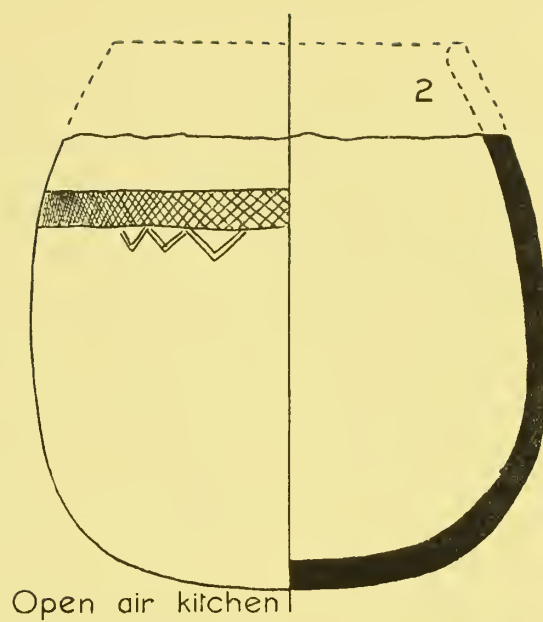
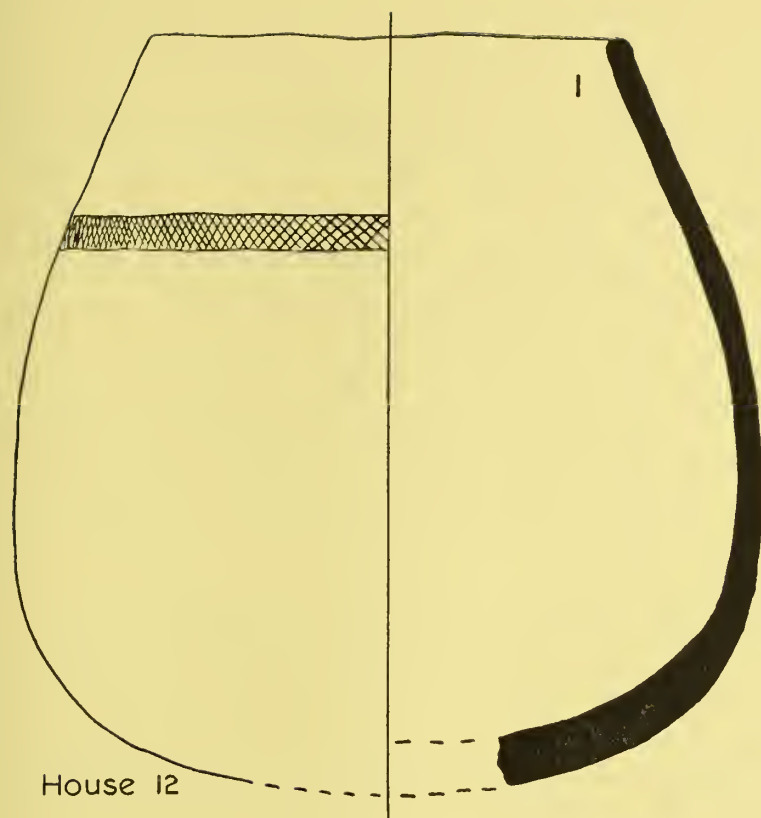


FIG. 40. Pottery, chiefly of the early period. 1:4

fragments of this kind of ware were found at Abu Geili (*see* p. 42 and Pl. XLVI B), and it has affinities with some modern Sudanese pottery. This was apparent even to Mackenzie, with his limited experience of the Sudan, for he wrote: "The impression of basket-work . . . seems to bring us into touch with village fabrics of the present day."

At Dar el Mek the vessels made of this ware appeared to be of much the same kind as the modern *burma* (*see* Fig. 40, 7), and it is likely that they were water-pots used for carrying rather than for storing water. It may be significant that most of the pottery labelled as coming from the "reservoirs" consisted of fragments of just this kind of mat-marked *burma*. Besides this shape, it is possible that certain flaring necks found on the site may have belonged to globular mat-marked bodies. The neck Fig. 40, 8 has an incised zigzag on the inside and is covered with a red slip; its exact provenance is unknown. This mat-marked ware, though equally widely distributed, did not occur in quite the same profusion as the coarse ware with "chequer band" decoration, type 1.

A third type of pottery regularly found in the deposits of the latest period consisted of fragments of those curious vessels having thick bases with horizontal perforations which have already been mentioned in the Abu Geili report (p. 49) and which appear as type XV on the type-sheet Pl. XXIX. For want of a more accurate term they are there referred to as "braziers". Some of the fragments found at Dar el Mek are shown in Pl. LXXXIII B and an almost complete example is to be seen lying on the floor of the Open-air Kitchen in the photograph Pl. LXXX 4. Another was found on the floor of House 12 and was (p. 159) the subject of the last entry in the diary. These objects were of different shapes and sizes and were not pots in the ordinary meaning of the word, but had some specialised use of which we know nothing. The fabric as shown by the fracture was nearly always black, but usually there was a slip of some nondescript colour on the outside. Sometimes, when the objects had been fired at a higher temperature than usual, the fracture showed an edging of red for 2 or 3 mm. from the surface on each side, and occasionally the fracture was all red. Even in these cases there seems to have been a thin surface wash or slip. Mackenzie, naturally, refers to these objects in many places in the diary. In one entry they are "fragments . . . which can now be regarded as belonging to the last period", and in another, "fragments [in Hut 3] turned up almost inevitably so much does one now expect these vessels in later deposits". These "braziers", again, did not occur in quantities comparable with those of the pottery of type 1.

The three kinds of pottery just described, although characteristic of the latest period of occupation, were not confined only to the uppermost strata of the site and they must have been in use to some extent in the middle period. Fragments of a "brazier" were found amongst the sherds from the floor of Hut 4, and sherds of all the kinds discussed occurred in all the collections from the ill-defined B stratum.

Some other sherds which belong to the latest period, but which are not characteristic of it, are shown in Pl. LXXXIII A 11 to 15 and described on p. 170. The sherd No. 11 is one of a number found on the floor of Hut 1 and from which the bowl in Fig. 40, 4 has been partly reconstructed.

The pottery of the early period was manifestly that which was found in the strata or levels below the floors of the buildings of the middle period, but, unfortunately, for one reason or another, little of this pottery was available for examination. There were a few sherds surviving from the stratum below Hut 7 between the floor at 1.60 m. b.s. and the rock at 2.25 m. b.s. (p. 154)

and also from the "black" stratum at 1.35 m. b.s. below Hut 4 (p. 152). From the lowest stratum, that above the rock beneath Hut 7, came the sherd shown as No. 1 in the photograph Pl. LXXXV A; the two rims shown in section in Fig. 41; a fragment of another thick rim covered with a polished red slip, and—whether or not it had strayed into its context by accident—a fragment of type 1 pottery. The sherd illustrated in the photograph was 17 mm. thick, was burnt bright red, the fracture showing a middle streak of black; it was smoothed inside and outside, was decorated with a "rocker" impressed lozenge design, and above the design, appearing darker in the photograph, was a band with a polished red slip. Nothing else like it was found on the site. The rim, Fig. 41 *a*, was of smooth, unpolished ware burnt red for a depth of 2 mm. from the surface, the rest of the fracture being black. The other rim, Fig. 41 *b*, was of black ware, with a pebble-burnished grey-buff slip with black patches, and belonged to a jar about 27 cm. in diameter.

From the black stratum below Hut 4 only four sherds could be traced, and they are shown in section in Fig. 42. Two of them, *a* and *c*, are typical of many which were found in the middle levels of the site; one, *b*, was uncommon, and the fourth, *d*, part of the base of a hand-made pot, was quite atypical since it was the only one to come under the present writer's observation. The sherd Fig. 42 *a*, which belonged to a pot of large but uncertain diameter, had a black fracture burnt red by firing for a depth of 1–2 mm. from the surface on each side, and was covered by a highly polished red slip on the outside and for about 3 cm. downwards from the rim on the inside. The fragment *b*, which also had a black fracture, had a smooth, dull red slip on the inside but was left black and rough on the outside. It was apparently part of a very large open bowl of which the outside was not intended to be seen and which may, when in use, have been sunk into the ground. It was certainly not the sort of vessel to have been carried about. Fragments of this kind were not common, but another, also rough black outside but brown-burnished inside, is shown in section in Fig. 43 *d*; it comes from the northern part of Terrace 2 somewhere between the levels of 35 and 120 cm. b.s. A third fragment, different in section but still part of a large bowl, is that from outside Hut 4, shown in Fig. 44 *e*. All three fragments are so small in comparison with the diameter of the pots that it is difficult to judge the slope of the sides, which may not therefore be accurately represented.

The sherd shown at *c* in Fig. 42 was black-polished on the inside and smooth red on the outside with a band of heavily incised decoration. Above the band the sherd decreased in thickness—or possibly the decoration was on a raised band—and the surface here was covered with a highly polished red slip of much the same kind as that on the rim in Fig. 42 *a*.

Thick, heavy rims, with a polished red slip such as that shown at *a*, were found in several of the B collections of pottery and one of unusual size is shown in Fig. 43 *b*. It will be convenient to refer to these rims as type 2. Also with this polished slip but of slightly different section, are *a* and *b* in Fig. 45; *a* is from the grain-pit in Hut 7 and *b* is from the A stratum in Terrace 1, Area 2.

Fragments such as Fig. 42 *c*, with a bold decoration apparently on a raised band and a red-polished zone above it, seemed to be fairly widely distributed over the site. The decoration was

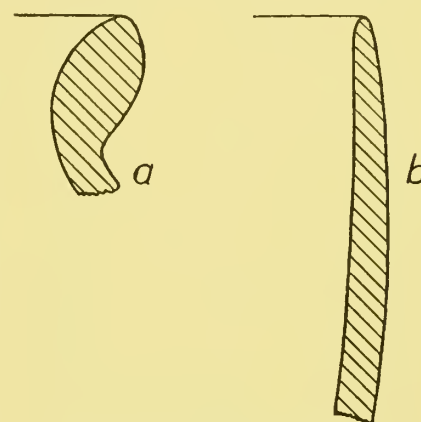


FIG. 41. Rims from lowest stratum. 1:2

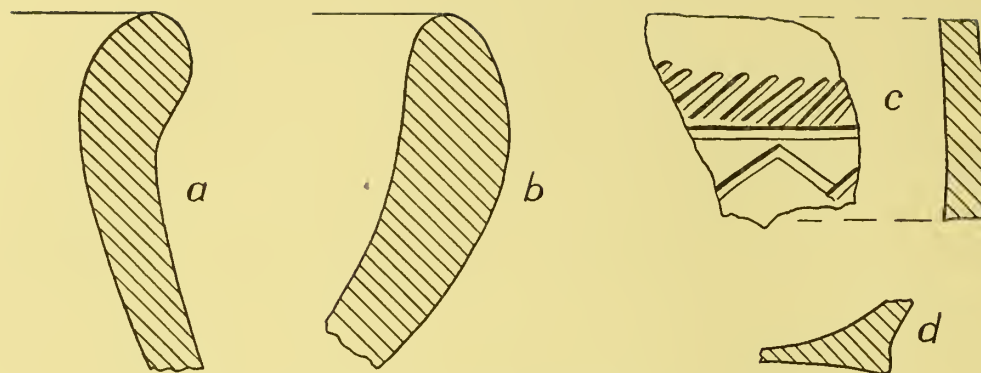


FIG. 42. Rims from black stratum below Hut 4. 1:2

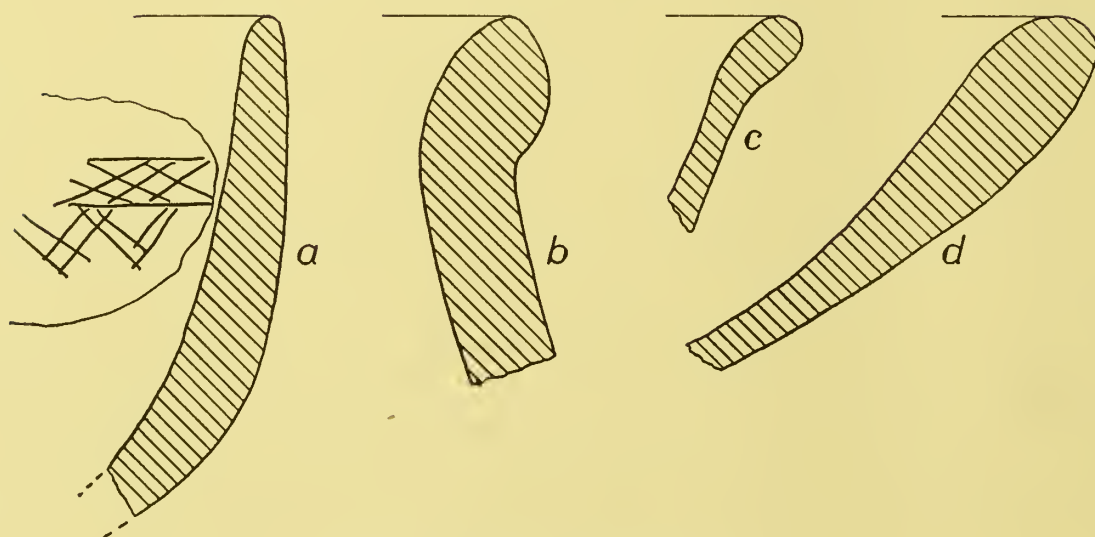


FIG. 43. Rims from Terrace 2. 1:2

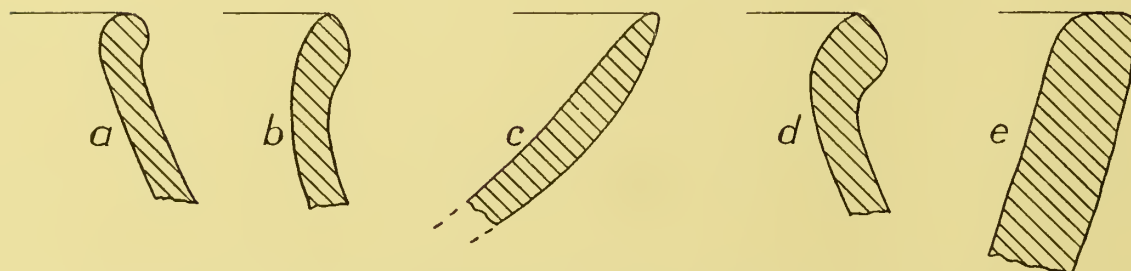


FIG. 44. Rims from floor-level of Hut 4; *a*, *b*, and *c* inside, *d* and *e* outside. 1:2

not usually a simple hatching, as in the early example drawn, but was more often a chevron design. Five fragments of this kind are illustrated in Pl. LXXXIII A 6 to 10, and in two of these fragments, Nos. 7 and 9, the lower edge of the polished slip above the pattern can be quite clearly discerned in the photograph. Fragments of this kind will be called type 3. It seems likely that the roughly incised band on the late pottery of type 1 is a degenerate form of this bolder decoration, for we have seen (p. 165) that the red polish was sometimes to be found associated with the cruder incised band in the last period of occupation.

The nature and colour of the polish on the rims and fragments under discussion are similar to that on the typical "dry-scratched" Jebel Moya pottery. It is difficult to describe a colour in words, but Mackenzie often referred to it as "a lustrous madder pigment slip". Some fragments were found which had a slip of a somewhat darker colour, "a fine, purple-tinted chocolate-brown", but to the present writer this appeared to be not so much the result of a special technique as the effect of accidental burning. It always occurred in association with sherds with the usual red polish.

Neither the red-polished rim fragments of type 2 nor the fragments of type 3 would alone have given any indication of the shape of the pots of which they once formed part, but by a fortunate chance a large fragment has survived which combines the two. This is the fragment from beneath the early floor under Hut 10 (p. 157), and it was large enough to enable the reconstruction in Fig. 40, 3 to be made, which suggests that the complete pot may have been of a similar shape to the modern *zir*. The polished red slip covers the whole of the pot above the band of decoration and extends for a few centimetres downwards inside the rim in exactly the same way as on the fragments referred to earlier. In this particular case the slip is faded and dull, owing, perhaps, to the composition of the strata in which the fragment was buried, and possibly, also, to the fact that the fragment does not belong to a very early period. The fracture, however, is of interest as showing how much care was taken over the making of these pots. Starting from the inside there is first a thin red-brown slip, then a dark-brown zone extending for about one-third of the thickness of the pot, then a middle zone of black, then an outer zone bright red due to firing, then a thick slip appearing pale in section compared with the red-fired zone, and last of all the red surface polishing paste. The outer thick slip was not applied after firing because the decoration was cut into it and this was obviously not incised after firing. A similar slip to be found on many of the sherds of the late period has already been mentioned.

In following up the connections of the pottery of the early period we have been drawn away from the lowest strata upward through the middle layers into the higher levels of the site. Descending again, we come to a consideration of stratified deposits which, by definition, must belong to the middle period. These are the deposits on the floor of Hut 4 and those on the red stratum outside the hut which was contemporary with the floor (p. 152). The sections of five of the sherds found on this level are shown in Fig. 44; *a*, *b*, and *c* are from the floor of the hut—or what remained of it—and *d* and *e* are from the stratum outside. *a* is red-polished on the outside and appears to be only a variant of type 2 already discussed; *b* and *c* are black-polished and undecorated; *d* is of smooth red ware with the middle third of the fracture black, and *e* is of coarse ware so well fired that the bright red zone extends inwards for about a quarter of the thickness of the sherd, the remainder of the fracture being black. It appears to be a fragment of a large open bowl and has already been mentioned on p. 165 above. Besides these sherds there were on the floor of Hut 4 a part of a "brazier"; one or two sherds of mat-marked ware; some fragments of type 2 and type 3,

and a fragment of a kind of ware not so far mentioned and which constitutes type 4. Sherds of this type are illustrated in Pl. LXXXIV 1 to 4. They are fragments of what appear to be open bowls, black-polished, decorated with a row of triangular stab marks on the outside and, on the inside of the rim, with a simple pattern, impressed with a "rocker", which has many variants and which occasionally showed a trace of red pigment. In Pl. LXXXIV the upper photograph shows the outside of some of these sherds and the lower photograph the inside. The bowls apparently had fairly straight, or only slightly curved, sloping sides similar to that drawn in Fig. 44 c and suggestive of the flat-bottomed bowls from the Fung graves at Abu Geili, but no flat bases or angle fragments showing the junction of the base and the side were observed.

The collection of sherds from the floor-level of Hut 4 is interesting because it contains some of the types of pottery associated with the lowest levels and some of those characteristic of the latest period of occupation. The only new kind to emerge is the black-polished, including type 4, which certainly appears to belong to the middle period. Mackenzie, when his excavation reached the intermediate levels, wrote: "The finer fragments with a black hand-polished lustrous surface chiefly of bowls . . . may equally be regarded as representing a somewhat earlier phase in ceramic development." And later ". . . until further evidence is forthcoming [it is] better to regard these wares as belonging to an earlier period than Huts 1, 2 and 10".

As for the red-polished wares of types 2 and 3, Mackenzie commented on them with some frequency and at some length, and the general tenor of his observations was that these wares belonged to the early period, as the following extracts show. "The use of the purple-tinted madder pigment slip may itself so far be taken as an indication of relative earliness." . . . "The find circumstances would seem to justify us in assigning all this group of fragments with the lustrous madder pigment to an earlier period than Hut 7." Or again: "Certain sherds with thick section and a lustrous madder clay or pigment slip tend to turn up in the earlier strata which were not noticeable in the deposits next the surface. It is not as yet quite certain that this kind of ware can be definitely associated with the earliest class of dwellings but it has already been ascertained that it occurs in deposits *underlying* the floors of these."

There remain a few sherds which are not typical of Dar el Mek and which may not have been made on the site at all. Perhaps the most interesting are those shown (5 to 9) in the lower row of the two photographs in Pl. LXXXIV and described on p. 171. The upper photograph shows the outside of the sherds and the lower one the inside. It is not necessary to add to the description on p. 171, but it should be noted that the fragments are from hand-made pots and that the grooves on the inside are not throwing rings but a form of decoration. All of them are from the B stratum and they drew no comment from Mackenzie.

The sherds illustrated in Pl. LXXXV A are from widely differing levels and are grouped together here simply because they exhibit decorative patterns which were unusual on the site. No. 1 in this photograph is the early sherd which has already been referred to; a description of the others, with their provenances, will be found on p. 171.

The fragments Nos. 1 to 6 on Pl. LXXXV B strike a familiar note because they are almost certainly fragments of the same kind of flat, open bowls as were found in the Fung graves at Abu Geili. Such fragments were widely but sparsely distributed over the site at Dar el Mek and seem to belong to a late, but probably not the latest, period of occupation. The fragments Nos. 7 to 9 are also of a kind found at Abu Geili, but they were not common either on that site or at Dar el Mek.

Of the few other sherds not hitherto mentioned and shown in section, that in Fig. 43 *c* appears to be wheel-made and, as such, unique on the site. The rim Fig. 45 *c* is red-polished, and the top is ornamented with a row of depressions probably made by the potter's finger-tips. Fig. 45 *d* is of smooth red ware and comes from House 3. The rims 5 and 6 in Fig. 40 are of unpolished red ware with a black fracture, and No. 9 in this figure is, of course, hard black ware with red patches on the outside.

This concludes the description of the pottery, and it has shown that there were much greater differences between the pottery from the lowest and the highest levels at Dar el Mek than was the case either at Saqadi or on the village site at Abu Geili. These differences were not so much due

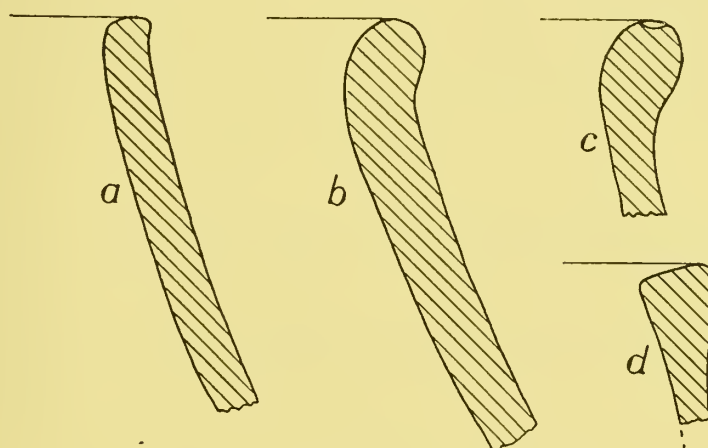


FIG. 45. Miscellaneous rims. 1:2

to a process of evolution or degeneration on the site itself as the result of occupation by different people at different times, though both causes probably operated to produce the varieties which have been described. There was, as might be expected, some overlapping of the pottery of different periods in the middle layers of the site, but some of the sherds found in the lowest strata were of a kind not observed at any higher level.

Apart from the mat-marked pottery, which occurs on sites widely separated in space and time, few of the Dar el Mek wares have their counterparts on known northern sites in the Sudan. It is therefore probable that the affinities, if not the origin, of some of these are to be sought in the archaeologically unexplored south; they need not be of any great antiquity.

It has been noted that certain kinds of ware—the “braziers”, the mat-marked and the black-polished flat bowls—were associated both with the higher strata at Dar el Mek and the Fung levels at Abu Geili, but it is curious that the most common of the Dar el Mek late wares, type 1, was not found at Abu Geili at all. The inference is that if there was any movement of pottery from one site to the other, it was from Abu Geili to Dar el Mek rather than in the reverse direction. Alternatively, there may have been some independent source of the “braziers” from which both our sites were supplied. It is to be remembered, however, that the habitation site corresponding to the Fung graves at Abu Geili has not yet been found, and until it is known no reliable conclusion as to its relationship with Dar el Mek can be drawn.

DESCRIPTION OF PLATES

PLATE LXXXIII

A. Potsherds

1. Black body, smooth but faded red slip inside and out. From Terrace 1, Area 1, A, 0–30 cm.b.s. [Khartoum]
2. Coarse black body, burnt bright red inside and out, unpolished. From Terrace 1, Area 1, A, 0–30 cm.b.s. [Oxford]
3. Black body, polished red slip above band, unpolished below; inside discoloured. From Terrace 1, Area 1, A, 0–30 cm.b.s. [Khartoum]
4. Black body, discoloured buff slip, polished above band. From Terrace 1, Area 2. [Oxford]
5. Similar to 1. From Terrace 1, Area 1, B, 35–135 cm.b.s. [Khartoum]
6. Red ware, middle third of fracture black; smooth inside, trace of polished slip above band. From Terrace 1, Area 1, A, 0–30 cm.b.s. [Oxford]
7. As above, but more of polished slip visible. From Terrace 1, Area 2, B, 20–90 cm.b.s. [Oxford]
8. Black body, with thick red slip inside and out; smooth but unpolished. From Hut 10, surface. [Khartoum]
9. Fairly soft ware, burnt red throughout, polished red slip above band. From Terrace 1, Area 2, B, 25–60 cm.b.s. [Khartoum]
10. Black ware, rough inside, traces of black polish above band. From Terrace 1, Area 1, B, 35–120 cm.b.s. [Khartoum]
11. Black body, burnt red on outside. Fragment from Hut 1. (*See also* Fig. 40, 4.) [Khartoum]
12. Black body, inside burnt buff. From Terrace 2 N, 20–40 cm.b.s. [Oxford]
13. Black body, burnt reddish-buff on surface, discoloured outside. From Terrace 1, Area 1, B, 35–135 cm.b.s. [Oxford]
14. Black ware, polished inside, rough outside. From Terrace 1, Area 1, B, 35–135 cm.b.s. [Khartoum]
15. Black ware, burnt dark-brown outside and inside. From Terrace 2 N, 20–40 cm.b.s. [Oxford]

B. Fragments of “braziers”

1. Burnt red-brown throughout, smoothed on outside. From Terrace 2 N, 20–40 cm.b.s. [Khartoum]
2. Coarse black ware, discoloured red-brown slip on outside; traces of white filling in incised decoration. From Terrace 1, Area 2, A, 0–20 cm.b.s. [Oxford]
3. Black body, burnt red inside and out; smooth red slip on outside. From Terrace 2 N, 20–40 cm.b.s. [Oxford]
4. Coarse black ware, thick brown slip inside and out, burnished; traces of white filling in decoration. From area of Hut 4, topsoil. [Khartoum]
5. Black body with burnished slip, buff with black patches. From Terrace 1, Area 1. [Khartoum]
6. Black ware, black-polished inside and out. From Terrace 1, Area 1, B, 35–135 cm.b.s. [Oxford]
7. Thick black ware with thick slip inside and out, faded red-brown with traces of burnish. From Terrace 2 S, below 30 cm.b.s. [Khartoum]
8. Thick black ware, black-polished outside, traces of white filling in decoration. From Terrace 2 N, below 30 cm.b.s. [Khartoum]
9. Thick black ware, burnished reddish-buff slip inside and out. From area of Hut 4. [Khartoum]
10. Thick black ware, burnt red on surface and in vicinity of holes; outside burnished, but faded and discoloured. From Terrace 2 S, below 30 cm.b.s. [Oxford]
11. Black ware, with faded red-brown slip inside and out. From Terrace 1, Area 3, A, 0–80 cm.b.s. [Oxford]

PLATE LXXXIV

Potsherds. The upper photograph shows the outside, and the lower the inside of the sherds.

1. Black-polished. From House 9, 0–45 cm.b.s. [Khartoum]
2. Black-polished. From Terrace 1, Area 1, B, 35–135 cm.b.s. [Oxford]
3. Black-polished. From House 3, below floor. [Khartoum]
4. Black-polished. From Terrace 1, Area 1, B, 35–135 cm.b.s. [Oxford]
5. Black ware with traces of polish. From Terrace 2 S, 30–120 cm.b.s. [Oxford]

6. Black ware, faded to grey on surface; traces of polish. From Hut 7, grain-pit. [Khartoum]
7. Buff ware throughout, greyish-buff polish. From Terrace 2 N, 20–40 cm.b.s. [Khartoum]
8. Black-polished. From Hut 11. [Oxford]
9. Black ware with remains of polish; traces of red filling in “rocked” band of decoration on both sides. From Terrace 1, Area 2, B, 35–65 cm.b.s. [Khartoum]

PLATE LXXXV

A. Potsherds with unusual decorations

1. Thick ware (17 mm.), black in middle of fracture, burnt bright red on either side, smoothed inside; trace of polished slip at top of design. From Terrace 1, Area 2, 1·60–2·25 cm.b.s. (Lowest habitation stratum.) [Khartoum]
2. Black ware, smoothed inside, traces of polish outside. From Terrace 1, Area 2, A, 0–20 cm.b.s. [Oxford]
3. Fitting fragments of unpolished black ware from Terrace 1, Area 2; one from A stratum, 0–20 cm.b.s., and the other from B stratum, 20–90 cm.b.s. [Khartoum]
4. Black ware, polished inside and out. From Hut 12. [Oxford]
5. Red ware, fracture red all through; unpolished outside but smooth slip inside. From Terrace 2, 20–40 cm.b.s. [Oxford]
6. Black ware, burnt bright red on both sides. From Terrace 2 N, A stratum. [Khartoum]
7. Black ware, burnt red on both sides, superimposed by grey-buff slip, burnished. From Terrace 1, Area 1, B, 30–130 cm.b.s. [Khartoum]
8. Black ware, smooth but unpolished. From Terrace 1, Area 3, A, 0–80 cm.b.s. [Oxford]
9. Bright red ware, smooth but unpolished; fracture red except on inside, where it is black. From House 9, 0–45 cm.b.s. [Khartoum]

B. Potsherds

Nos. 1 to 6 are fragments of black-polished “Fung” bowls such as were found in the Abu Geili graves.

1. From Terrace 2, S.W., 30–80 cm.b.s. [Khartoum]
2. From Terrace 2, N.W., 0–40 cm.b.s. [Khartoum]
3. From Terrace 1, Area 1, B, 30–120 cm.b.s. [Oxford]
4. From Hut 11. [Oxford]
5. From Terrace 1, Area 1, B, 30–120 cm.b.s. [Khartoum]
6. Same provenance as 5. [Oxford]
7. Coarse black ware, burnt red on outside. From Terrace 1, Area 1, B, 35–120 cm.b.s. [Khartoum]
8. Red ware, middle streak of black in fracture; smooth inside, burnished but discoloured outside. From Terrace 1, Area 1, B, 35–120 cm.b.s. [Khartoum]
9. Smooth but unpolished black ware. From Terrace 1, Area 2, B, 25–60 cm.b.s. [Oxford]

CHAPTER XV

MISCELLANEOUS SMALL OBJECTS

BEADS

THE majority of the small objects found at Dar el Mek were beads; these, either as single beads, or fragments, or in small collections, accounted for 238 of the 390 entries in the object register.

Examples of the beads are illustrated in Pl. LXXXVII, those in the upper photograph being of carnelian and faience and those in the lower of glass, red paste, and other materials. Full details are given in the description of the plate on p. 177. Besides the kinds illustrated there were a few small faience ball beads, a small quantity of ostrich egg-shell disk beads, and a number of clay beads (registered as spindle-whorls) of which representative profiles are given in Fig. 46.

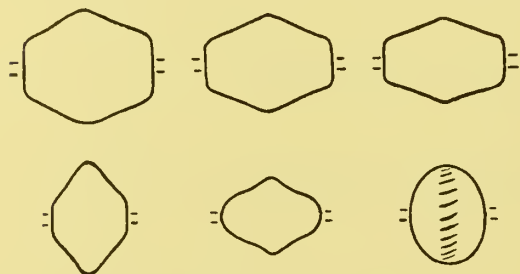


FIG. 46. Profiles of clay beads. 1:2
(cf. Pl. XLVII B)

The first thing to be said about all these beads is that they are of exactly the same types as were found at Abu Geili and must obviously have been supplied through the same trade channels. These types have already been fully described in Chapter V, and additional comment is necessary only in the case of particular objects.

It is to be noted as a matter of interest that the bead No. 26 in the bottom row of the photograph, Pl. LXXXVII, is of amber, an uncommon material not previously en-

countered on any of the sites dealt with in this volume. The remainder of the beads in this row are of faience and of the by now familiar type E. 1. b. These, in general, were somewhat smaller at Dar el Mek than at Abu Geili and had a smoother glaze. The precise significance of this is not clear; they may have been made by different hands, or in another factory, or at a different time.

In the photograph, Pl. LXXXVII B, the short strings of glass and red-paste beads at 2, 7, and 8 are not in their original stringing, but have been made up of beads found at different times and registered under different object numbers. The string of white glazed frit beads, No. 6, were, however, recovered together from Reservoir 5, and the amber glass beads, No. 14, came from Reservoir 2. These provenances are an indication that the reservoirs were actually used during the occupation of the site and they show, too, that the water must have been too deep or too opaque to make any attempt at the recovery of lost property worth while.

The most striking object shown in this photograph, at least in its present context, is the small amulet in the form of a hawk, No. 3, of fine-grained variegated (cream and purple) stone with the base broken away. This may well be of Napatan date, and raises interesting speculations as to the way in which it reached Dar el Mek, though it could quite possibly have been picked up at Jebel Moya on Site 100. Evidently it attracted some attention at the time, for an attempt was made to copy it in clay, as may be seen in Fig. 51 *b*. The object No. 16 was an amulet of a different kind; it is the pierced canine tooth of a dog.

Mackenzie, after describing the carnelian faceted beads found at Dar el Mek (and which, incidentally, he refers to as agate), continues:

“These are so recurrent in the surface deposits that it looks as if they must belong to the last period of the site. . . . In the same lots as the agate beads faience beads of a rough ring type and of a pale green-blue hue are apt to emerge and they are equally recurrent in the surface deposits.

“The history of the faience technique in beads suggests early associations and, of course, the provenance of the technique has to be sought in Egypt. If the faience beads in question turn out to be direct imports from Egypt they are likely to afford a chronological clue. But up to date at Dar el Mek, while it seems clear that these beads occur in company which connects them with the surface levels, it is not at all so clear that they occur in the earlier deposits. They stand out distinctly in the company to which they belong but so far it would seem that this company is late rather than early.

“The numerous tiny glass beads, usually semi-transparent green, that come out in every lot of small finds can hardly be made to yield any chronological result until we know more about their provenance and their associations elsewhere.”

In case Mackenzie's use of the term “recurrent” might give a misleading impression of the quantity of beads found, the following figures are given:

Carnelian faceted, all types	39 whole + 26 broken.
Faience, rough ring (type E. 1. b.)	19 „ + 26 „
Carnelian ball	8
Quartz	6
Clay	49

Green or blue glass beads were recorded under 66 object numbers and yellow glass under 9 object numbers, but such entries might cover several beads or beads of more than one type.

The small glass beads, as noted in Chapter V, have so long a history that they are virtually undatable, but the faceted carnelian types have been shown to be medieval. Their presence in the surface deposits at Dar el Mek seems to equate the latest occupation of that site with the Fung period at Abu Geili. Other beads which support this conclusion are the polychrome glass beads (the only two found) at 4 and 5 in Pl. LXXXVII B, which are of exactly the same kind as those from Abu Geili illustrated in Pl. XLVIII B 3.

STONE OBJECTS

The majority of the stone objects found on the site—and they were not very numerous—were pounding- or rubbing-stones, chiefly natural pebbles adapted for the purpose. Sandstone rubbers were rare, and conspicuous by their absence were heavy grinding-stones such as are used to-day or such as might reasonably have been expected to occur in association with the stone mortars referred to earlier in this report. A few spherical pounding-stones of quartzite or Makwar stone¹ were found, chiefly in the area of Hut 1, and these may quite well have been brought from Site 100 during the lifetime of the owner of the hut. Ample supplies must have been lying about on that site in medieval times.

Other stone objects are illustrated in Pl. LXXXVI B and described on p. 177, and of these Nos. 3, 11, 12, and 14 must also almost certainly have come from Site 100. The broken stone

¹ See *Jebel Moya*, vol. I, p. 173.

pick, No. 3, and the celts, Nos. 11 and 14, all of diorite and all of Jebel Moya types, have been re-used as hammer-stones or pestles, but the small celt, No. 11, appears in addition to have been used as a pot-burnisher; its sides are polished and stained with red pigment. The object No. 12 is a fragment of a stone armlet of green micaceous schist, of a kind familiar on Site 100.

The objects Nos. 1, 2, and 5 were found on the floor of Hut 1 (see Pl. LXXX 2) and were amongst the objects considered by Mackenzie to be floor deposits. The mace-heads 1 and 2, probably unfinished, are of sandstone with biconical perforations and, since they are of unfamiliar types, it is possible to regard them as contemporary with the hut. This is more difficult in the case of object No. 5—it is quite unmistakably an archer's loose of the kind discussed at some length in Chapter VI. Such objects have hitherto been associated chiefly with the Meroitic period and have not been known to occur on sites later than X-group; hence it is to be inferred that those found at

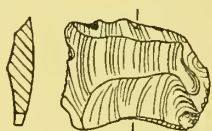


FIG. 47. Chalcidony flake. 1:1

Dar el Mek must either have been lying about the site for some centuries or have been brought there during the occupation from some other site. The complete specimen, No. 4, was recovered from Reservoir 2; the broken one, No. 6, was found outside Hut 4 and looks as if it had been burnt; No. 7 is from the A stratum of Terrace 1, Area 3, and No. 10 is from Terrace 1, Area 2. The archer's looses, it will be seen, were not confined to any particular level of the site.

The broken object, No. 9 in the photograph, is yet another of those baffling rings, neither mace-head nor armlet, which have been noted on Site 100 and elsewhere and never satisfactorily accounted for, and No. 8 is a disk made by grinding down a natural pebble (*cf. Jebel Moya*, p. 173).

One more stone object which ought to be mentioned is the chalcidony flake O.C. 88 shown in Fig. 47 and now in Khartoum. This is not a chance product, but a flake which has been deliberately struck and carefully trimmed, though the cutting-edge has been damaged either by accident or use. It was found on Terrace 1, Area 2, at a depth of 60 cm. below ground surface.

METAL OBJECTS

(1) **Iron.** Some thirty-eight iron objects were found at Dar el Mek; all of them were small and most were fragmentary and badly corroded. Ten of them were registered as "nail or arrow-head", which indicates that they were of the indeterminate form usually referred to as a "point". There were eight rings of wire, with the ends not welded together, which were probably ear-rings, and a few smaller welded rings which may have been chain links. There was also, as mentioned in the footnote on p. 84, a small cluster of interlaced rings, which probably once formed part of a garment of chain mail. This is O.C. 334, from Hut 11, somewhere between the levels of 35 cm. and 120 cm.b.s.

Four of the objects were recognisably fragments of tweezers; two may have been small knife-blades, and one can only be described as a spatula. Of the few objects registered as arrow-heads only one, O.C. 107, was of recognisable shape and was, incidentally, the largest metal object found during the excavation. It is shown in Fig. 48, and may possibly have been unfinished; for while the tang is of round section with a sharp point, the head is of rectangular section and has a blunt point and no cutting-edge. Its provenance is given as Terrace 1, Area 3, 60 cm.b.s.

(2) **Copper or bronze.** Only ten objects of this metal were registered. Three of them were amorphous fragments; one was part of a tweezers; one was a tubular bead; three were ear-rings,

and one was a finger-ring of thin metal which may well be comparatively modern. The remaining copper object—the most unusual and unexpected to be found on the site—was the ornament of thin metal only 0.3 mm. thick, in a good state of preservation, shown (as it appeared after cleaning) in Fig. 49. It is O.C. 184, now in Khartoum, and, according to the records, it was found in Hut 11 between the levels of 30 cm. and 80 cm. below the surface. Although Mackenzie made no comment upon it in his diary, he registered it as “Cross, front face hollow to contain relic (?), suspension loop broken off.” Mackenzie’s query is justifiable, for there is no trace of any fastening

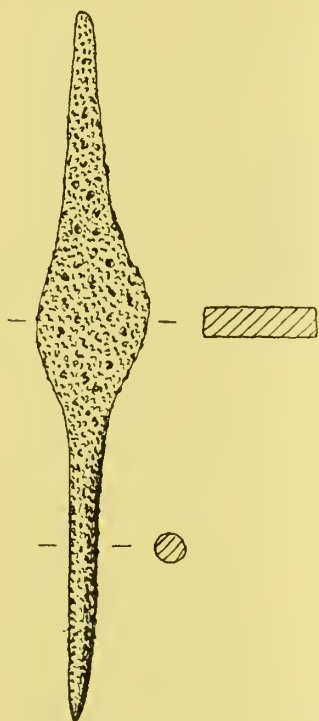


FIG. 48. Iron arrow-head,
O.C. 107. 1:1

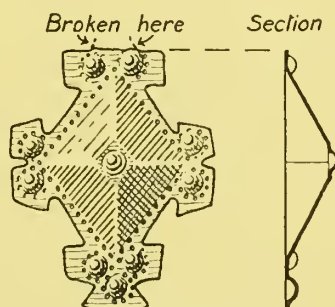


FIG. 49. Copper cross,
O.C. 184. 1:1

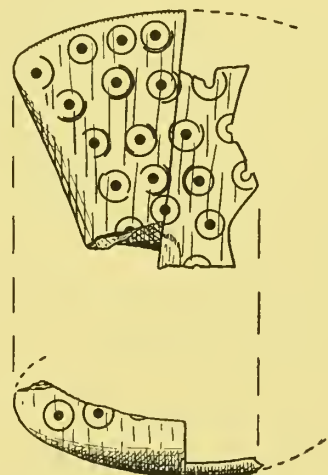


FIG. 50. Worked ivory fragments,
O.C. 132. 1:1

at the back of the object which would have held in place anything put into the hollow. To the present writer the ornament looks like a stamping made with a metal die in fairly modern times, but if Mackenzie had any suspicions of it he refrained from giving them expression.

The metal objects were not confined to any particular area of the site, though they occurred chiefly in the upper strata. As many of them came from siftings, the exact levels at which they were found cannot in most cases be determined, but they belong only to the A and B strata and none are recorded from the early habitation levels.

BONE AND IVORY

Under this head are a few bone points, an ivory object like a small, straight tusk, and the ivory fragments, O.C. 132, shown in Fig. 50, part of an object which cannot be completely reconstructed. This fragment was found in “grain-pit” *d* at a depth of 120 cm. below the surface, but this figure has little significance, because the pit contained a mixed and disturbed deposit. Mackenzie showed

some interest in this ivory ornament—it was a relief from the monotonous catalogue of potsherds and beads—and he wrote: “The small incised circles with centres indicated by punctuations are found elsewhere, as in Syria, in a context which would bring them back beyond the period of the Dual Monarchy in Palestine when the influence of the Philistines was dominant in the land though that of Cyprus was not yet entirely at an end. This ivory might well be Cypriote work and the ivory itself of Asiatic provenance.” A detail which is of interest rather than importance is that the implement used to strike out the circles must have been rotated backwards and forwards, resulting

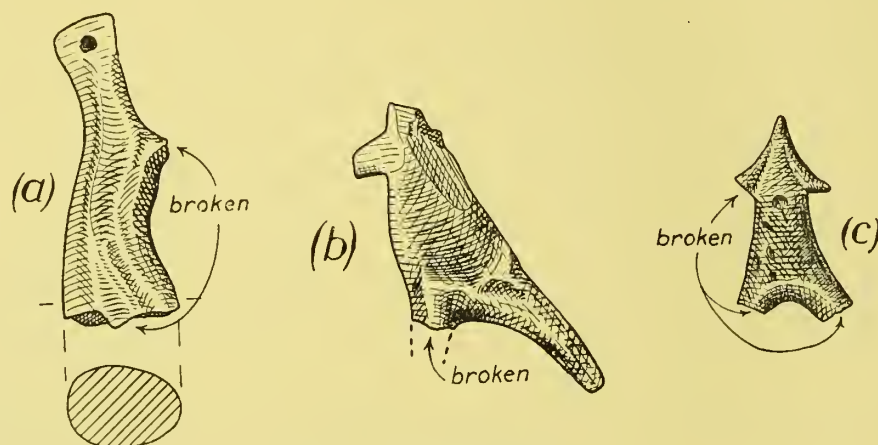


FIG. 51. Clay figurines. 1:1

in the formation of overlapping lines, as may be seen in the drawing. The object is now in the Ashmolean Museum.

CLAY FIGURINES

A few clay figurines were found, some of them broken animal forms of no particular interest. A small human figurine, O.C. 152, from the surface stratum in Terrace 2, is shown in Fig. 51 *c*, but *a* and *b* in this figure are unusual and call for some remark. The figure at *b*, of buff ware, is that of a bird, which is in itself unusual, but this one appears to be an attempt to imitate the stone hawk shown in Pl. LXXXVII B and referred to on p. 172. The legs, unfortunately, are broken away, but otherwise the object shows no sign of damage, and there can be little doubt it was originally intended to represent a bird. The object at *a*, of pale-buff, hardened clay, suggests the leg of some animal, and, since it is pierced for suspension, it may have been an amulet of some kind. It is O.C. 99, from Terrace 1, Area 3, A stratum. The bird is O.C. 172, from Terrace 2 south, between the levels of 30 cm. and 80 cm. below the surface. All three objects are now in Khartoum.

DESCRIPTION OF PLATES

PLATE LXXXVI. Stone objects

A. Mortars or querns, from a photograph taken in Wimpole Street

B. Miscellaneous small objects

1. Unfinished mace-head, fine buff calcareous sandstone, from floor of Hut 1. [Khartoum]
2. Unfinished mace-head, fine, pale grey, purple-mottled, silicified sandstone, from floor of Hut 1. [Khartoum]
3. Fragment of pick, re-used as a hammer-stone; diorite. O.C. 317, from Terrace 2 S, 30–120 cm.b.s. [Khartoum]
4. Archer's loose, diorite schist. O.C. 383, from Reservoir 2. [Oxford]
5. Archer's loose, rhyolite (?), from floor of Hut 1. [Khartoum]
6. Fragment of archer's loose, diorite. O.C. 235, from south of Hut 4, 80 cm.b.s. [Khartoum]
7. Fragment of archer's loose, diorite. O.C. 266, from Terrace 1, Area, 3, 0–35 cm.b.s. [Oxford]
8. Disk, grey dolerite. O.C. 364, from Terrace 1, Area 1, 30–120 cm.b.s. [Khartoum]
9. Fragment of ring, cream, purple-banded, silicified sandstone. O.C. 66, from Terrace 1, Area 1, 50 cm.b.s. [Oxford]
10. Fragment of archer's loose, red syenite (?). O.C. 74, from Terrace 1, Area 2. [Oxford]
11. Celt, diorite, worn at edge and butt by re-use as pounder, red-stained on faces. O.C. 332, from Terrace 1, Area 3, 30–80 cm.b.s. [Oxford]
12. Fragment of stone armlet, green micaceous schist. O.C. 363, from Terrace 1, Area 1 S, 30–120 cm.b.s. [Khartoum]
13. Fragment of whetstone, greenstone (? jadeite). O.C. 143, from Terrace 2, House 10, floor at 20 cm.b.s. [Khartoum]
14. Celt, diorite, re-used as pounder on edge and butt. O.C. 133, from Terrace 1, Area 2, deposits of grain-pit *d*, 90 cm.b.s. [Khartoum]

PLATE LXXXVII. Beads

A. Nos. 1–19 inclusive are of carnelian

Nos. 20–25 inclusive are of faience, with pale blue-green glaze

No. 26 is of amber

1. O.C. 370. Type R. 2. b, from Terrace 2 N, 30–130 cm.b.s. siftings. [Khartoum]
2. O.C. 86. Type R. 3. b, from Terrace 1, Area 2, 50 cm.b.s. [Oxford]
3. O.C. 256. Type N. 3. a, from Terrace 2, 25–60 cm.b.s. [Peabody]
4. O.C. 371. Type R. 3. b, same provenance as 1. [Oxford]
5. O.C. 206. Type N. 4. a, from Terrace 1, Area 2, 20–65 cm.b.s. siftings. [Khartoum]
6. O.C. 390. Type V. 4. d, from Reservoir 5. [Oxford]
7. O.C. 170. Type V. 3. d, from Terrace 2 S, 30–80 cm.b.s. [Khartoum]
8. O.C. 125. Type V. 3. d, from House 3, above floor 15 cm.b.s. [Peabody]
9. O.C. 384. Irregular, from Reservoir 2. [Khartoum]
10. O.C. 365. Type K. 3. f, from Terrace 2, S.E., 30–130 cm.b.s. [Oxford]
11. O.C. 168. Type K. 3. f, same provenance as 7. [Khartoum]
12. O.C. 71. Type N. 3. f, from Terrace 1, Area 1, 60 cm.b.s. [Khartoum]
13. O.C. 384. Type A. 3. c, from Reservoir 2. [Khartoum]
14. O.C. 62. Type K. 3. g, from Terrace 1, Area 1, 30–90 cm.b.s. [Khartoum]
15. O.C. 326. Type V. 2. d, from Terrace 1, Area 3 N, 50 cm.b.s. [Peabody]
16. O.C. 169. Type T. 3. f, same provenance as 7. [Khartoum]
17. O.C. 127. Type K. 3. g, from House 3, on floor at 60 cm.b.s. [Oxford]
18. O.C. 141. Type R. 3. d, from Terrace 2, west of House 10, 25 cm.b.s. [Khartoum]
19. O.C. 366. Type G. 4. e, same provenance as 10. [Oxford]

20. O.C. 43. From Terrace 1, Area 1, 55-130 cm.b.s. [Khartoum]
21. O.C. 344. From Terrace 1. Area 1 S., 0-35 cm.b.s. [Oxford]
22. O.C. 39. From Terrace 1, Area 1, 55-70 cm.b.s. [Peabody]
23. O.C. 100. From Terrace 1, Area 3, 45 cm.b.s. [Peabody]
24. O.C. 179. From Hut 11, 30-60 cm.b.s. [Khartoum]
25. O.C. 148. From Terrace 2, 0-20 cm.b.s. [Oxford]
26. O.C. 384. From Reservoir 2. [Khartoum]

B. Miscellaneous materials. [All to Khartoum]

1. Green glass. O.C. 141, from Terrace 2, west of House 10, 25 cm.b.s.
2. Green, blue, and yellow glass, originally with iridescent decay, cleaned. O.C. 241, from Terrace 1, Area 3, 0-25 cm.b.s. siftings; O.C. 248, from same area, 25-120 cm.b.s. siftings. O.C. 312, from Terrace 2, 30-120 cm.b.s.
3. Hawk pendant, fine-grained variegated (cream and purple) stone. O.C. 222, from Terrace 1, Area 3, 30-120 cm.b.s.
4. Polychrome glass bead, red, white, blue, and green. O.C. 223, from Terrace 2, S.W., 60 cm.b.s.
5. Bead similar to 4. O.C. 312; from Terrace 2 S, 30-120 cm.b.s.
6. White glazed frit. O.C. 390, from Reservoir 5.
7. Green and blue glass, undecayed, from Terrace 1, Area 3. O.C. 241, from 0-25 cm.b.s. siftings, and O.C. 248, from 25-120 cm.b.s. siftings.
8. Red paste. O.C. 3, from Hut 1, 25 cm.b.s.; O.C.s 37, 31, from Terrace 1, Area 1, 55-70 cm.b.s.; O.C. 97, from Terrace 1, Area 3, 30 cm.b.s.; O.C. 241, from Terrace 1, Area 3, 0-25 cm.b.s. siftings; O.C. 305, from Terrace 2 SE. 35-75 cm.b.s.; O.C. 350, from Terrace 1, Area 1, 30-120 cm.b.s.; O.C. 375, from Terrace 2 N, 30-130 cm.b.s. siftings.
9. Quartz. O.C. 156, from Terrace 2, 20-40 cm.b.s.; O.C. 248, from Terrace 1, Area 3, 25-120 cm.b.s.; O.C. 328, from Terrace 1, Area 3 N, 100 cm.b.s.; O.C. 345 from Terrace 1, Area 1, 0-35 cm.b.s.
10. Yellow glass, slightly decayed and cleaned. O.C. 344, from Terrace 1, Area 1 S, 0-35 cm.b.s.
11. Opaque, bright blue glass, faceted. O.C. 248 from Terrace 1, Area 3, 25-120 cm.b.s.
12. Red and black paste. O.C. 384, from Reservoir 2.
13. Red paste with three inlaid white spots. O.C. 95, from House 3, floor at 20 cm.b.s.
14. Amber-coloured glass, two faceted, one ball. O.C. 384, from Reservoir 2.
15. Agate. O.C. 325, from Terrace 1, Area 3, 1-35 cm.b.s.
16. Pierced canine tooth of a dog, from Terrace 2 S, 30-120 cm.b.s.
17. Agate. O.C. 49, from Terrace 1, Area 1, 55-130 cm.b.s.

CHAPTER XVI

CONCLUSIONS

THIS chapter might more appositely be headed "Reflections and Observations", for the only definite conclusion that can be reached on the evidence available is the obvious one that the latest habitation period at Dar el Mek was contemporary with the Fung period at Abu Geili. The occupation of the site therefore probably ended not earlier than the sixteenth century A.D., but, apart from that, its history is obscure.

Whether it was realised at the time or not, the truth is that the excavation was broken off before certain simple but necessary operations had been carried out. In particular, there is no evidence of any effort to obtain cross-sections of either of the terraces which were investigated. Further, in spite of the fact that Mackenzie's diary runs to 118 quarto pages and is unfinished at that, it tells us nothing about the terrace walls, and yet these walls are of crucial importance in any attempt to unravel the history of the occupation. Even such details as the height and thickness of the walls is nowhere given. The (unfortunately unlocated) walls shown in Pl. LXXIX 1 and 2 seem to vary from 1 metre to 1.5 metres in height, and it would not be unreasonable to assume some such height as this for the walls—the eastern retaining walls—of Terraces 1 and 2, with which the diary deals. In other words, these terraces would be from 1 to 1.5 metres above the terraces below them to the east.

To deal only with Terrace 1 (for the same reasoning applies equally to Terrace 2 and any other terrace), the buildings of the latest period, such as Hut 1, had their foundations more or less level with the top of the terrace wall as it existed at the time of excavation; the buildings of the middle period, such as Huts 4 and 7, were well below the top of the wall, and some of the strata below the huts must have been at a level lower than that of the lowest visible course of the wall.

Here we have to decide whether this wall was built as a revetment, or retaining wall, or was originally a free-standing wall which has in course of time become silted up more from behind than in front. A free-standing wall would have been originally nearly 2 metres in height and correspondingly thick, and we have only to attempt to visualise the hill-side littered with enormous and apparently purposeless walls of this kind to conclude that they could never have existed. The terrace walls have, then, to be accepted as what they seem to be and what Mackenzie considered them to be, namely, retaining walls.

Our terrace, then, could have attained its modern configuration in one of three ways, illustrated diagrammatically in Fig. 52. (1) The first settlers could have begun it, and the walls they might have built are shown black. As the level of the terrace (and that of adjacent terraces) gradually rose owing to the accumulation of detritus and debris of occupation, an additional course of stones would from time to time have been added to the wall to keep it level with the terrace until both reached their present height. (2) The terrace could have been started at some intermediate period, the walls again being shown black, and the construction could have grown upward in the same

way as that already suggested. (3) Our terrace, with all the others, could have been constructed much as we now see them by the latest inhabitants of the settlement, and this, in the present writer's view, is what is most likely to have happened. As far as can be judged from the photographs the terrace walls were built in one operation; they do not appear to have risen a course or two at a time at intervals over a long period.

The question of their age need not, however, have been a matter for speculation at all; it could quite easily have been settled on the spot simply by excavating to find the foot of a wall. If this were found to be only a short distance beneath the modern surface the wall must have been built by the latest inhabitants of the site, as can clearly be seen from Fig. 52, 3. As for the terrace itself, a cross-section would have given some indication of its growth and could, of course, have been obtained either by cutting a trench or by excavating "horizontally" and leaving a wall or

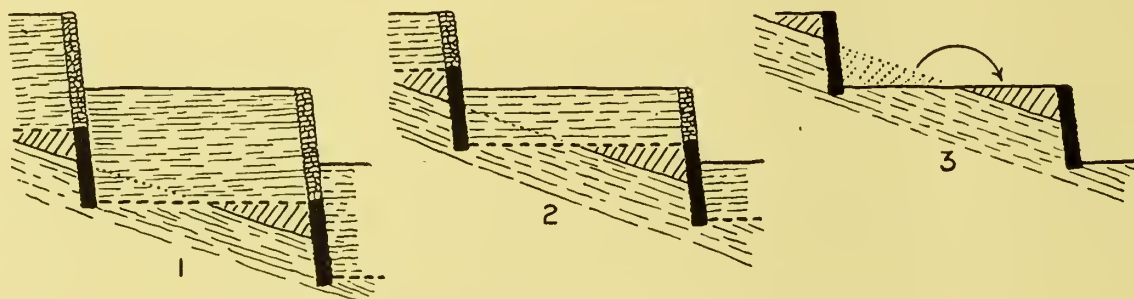


FIG. 52. Diagrams showing possible growth of terrace walls

balk of earth with the strata exposed *in situ*, as was done at Abu Geili and Saqadi. As Mackenzie was so careful to provide sections of the Saqadi site it is difficult to understand why he did not do the same at Dar el Mek; possibly he had no time before work on the site was suspended.

The sections of the strata given in Figs. 32 and 34 are those exposed on the west side of grain-pits, and they show the stratification for a limited distance *along* the terrace and not across it. Now, at whatever period the terraces were formed, their construction must have entailed a certain amount of levelling and disturbance of the (then) surface strata; and if, as seems likely, the walls were built at a late period in the history of the site, the debris found at the time of the excavation immediately behind the upper part of a terrace wall might quite well have been a filling consisting of material removed from the other side of the terrace (or from a terrace below) during levelling operations, as indicated by dotted lines in Fig. 52, 3. A transverse section would have shown the kind of disturbance which had taken place; but, as matters stand, it is uncertain how much of the deposit overlying the floors of, say, Huts 4 and 7, is natural accumulation (debris of occupation) and how much was deliberately deposited during the cutting-out of the terrace and the building of the wall.

A section, however, though it might have shown the sequence of events in the area under investigation, would still not have thrown any more light on the date of the first occupation of the site than was shed by the pottery from the lowest strata, which was by itself quite undatable. The few objects of earlier than medieval date from Dar el Mek were not found in significant positions, and were all such as could easily have been brought there from other accessible sites at any time before the end of the occupation. Yet some negative evidence can be adduced that the site was

not occupied during the early centuries A.D. There is nothing, for example, in the finds to suggest any connection between Dar el Mek and Saqadi, and not once in the whole course of the diary does Mackenzie, who was in the best position to judge, hint at such a connection. It seems likely, then, that the Dar el Mek site was not occupied until after the settlement at Saqadi was abandoned, and then by a different people.

Since the results of the excavation provide no clue to the date of the beginning of the occupation, it is to history that we must turn for possible enlightenment. It may be taken as axiomatic that in the Northern and Central Sudan people do not of their own unfettered choice elect to live on hill-tops or wind-swept ridges; those tribal groups which are now found in such situations were originally constrained to adopt them by hostile forces. The tribes, for instance, who to-day inhabit the Nuba Hills took to those hills in the first instance as a refuge from the Arab slave-raiders of the nineteenth century. Scanning the pages of history for the record of some analogous state of affairs at an earlier period, we find that there was an influx of Arabs in the thirteenth and fourteenth centuries, after the collapse of the Christian kingdom of Nubia, with its capital at Old Dongola. Those Arabs swept over the ruins of this kingdom into Kordofan and Darfur and up the Blue Nile, and they must have spread out into the Gezira plain. In the face of such an incursion it would not be surprising if some of the dwellers in this plain took to the nearest high ground, and hence we may not unreasonably suppose that the earliest inhabitants of the Dar el Mek ridge settled there about the beginning of the fourteenth century A.D.

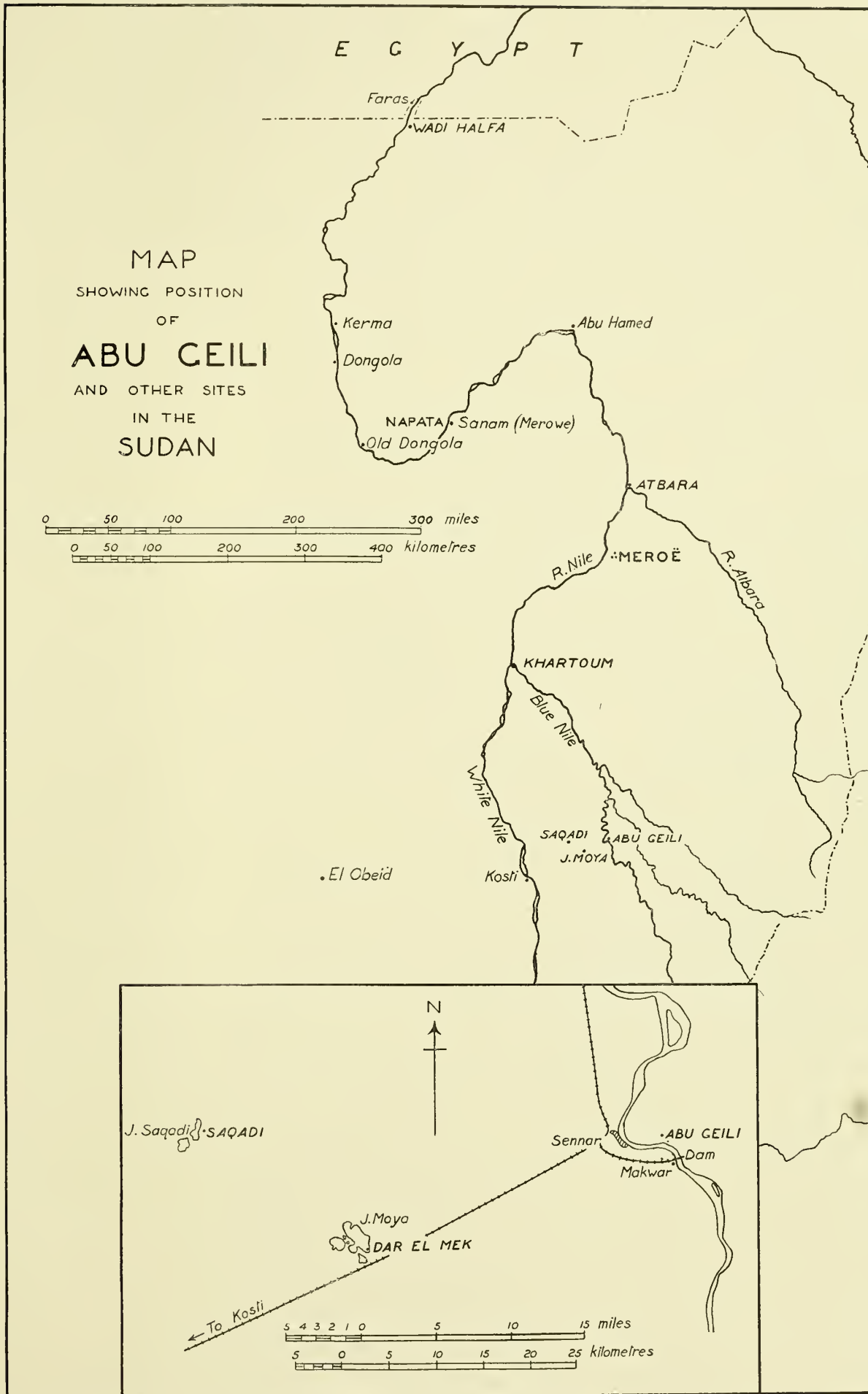
The occupation may or may not have been continuous, but it is clear that in course of time, due to invasion or immigration, there was some change in the racial stock and some deterioration in the skill of the potters. This change may possibly have been connected with the approach of the Fung invaders from the south, for it is likely that this tide of invasion swept before it a fringe of uprooted people (in modern jargon "displaced persons") some of whom may have sought refuge on the Dar el Mek ridge. They may have entered a deserted settlement, but more probably they settled down and coalesced with the people they found already in occupation. This increase in the number of inhabitants led to the extensive terracing which remains to this day. It was not adapted to any defensive end, and Mackenzie did not consider it intended for cultivation; it was undertaken purely for habitation purposes.

Once established, the settlement was not deserted immediately the circumstances which had brought it into being had ceased to exist; people would continue to live there out of inertia or force of habit for some time. The evidence of the beads and pottery shows clearly enough that the settlement, in its later days, was not beleaguered and isolated, but shared in the common culture and trade of a region which embraced Abu Geili, some distance away on the other side of the river, and which doubtless included other sites which await discovery and excavation if they have not already been overrun by the Gezira Irrigation Scheme.

On the hypothesis just outlined the occupation must have lasted—possibly with intermissions—about three centuries. It must be admitted, however, that there is no incontrovertible proof that the suggestions put forward are correct; the most that can be said for them is that they do not conflict with the evidence of the finds nor with the historical record. In the present state of our knowledge of the history of the Sudan there is no means of dating, with any degree of accuracy, any site such as those which have been dealt with in this volume. If circumstances had not prevented Mr. Wellcome from carrying out an archaeological survey of the Gezira—for that, in

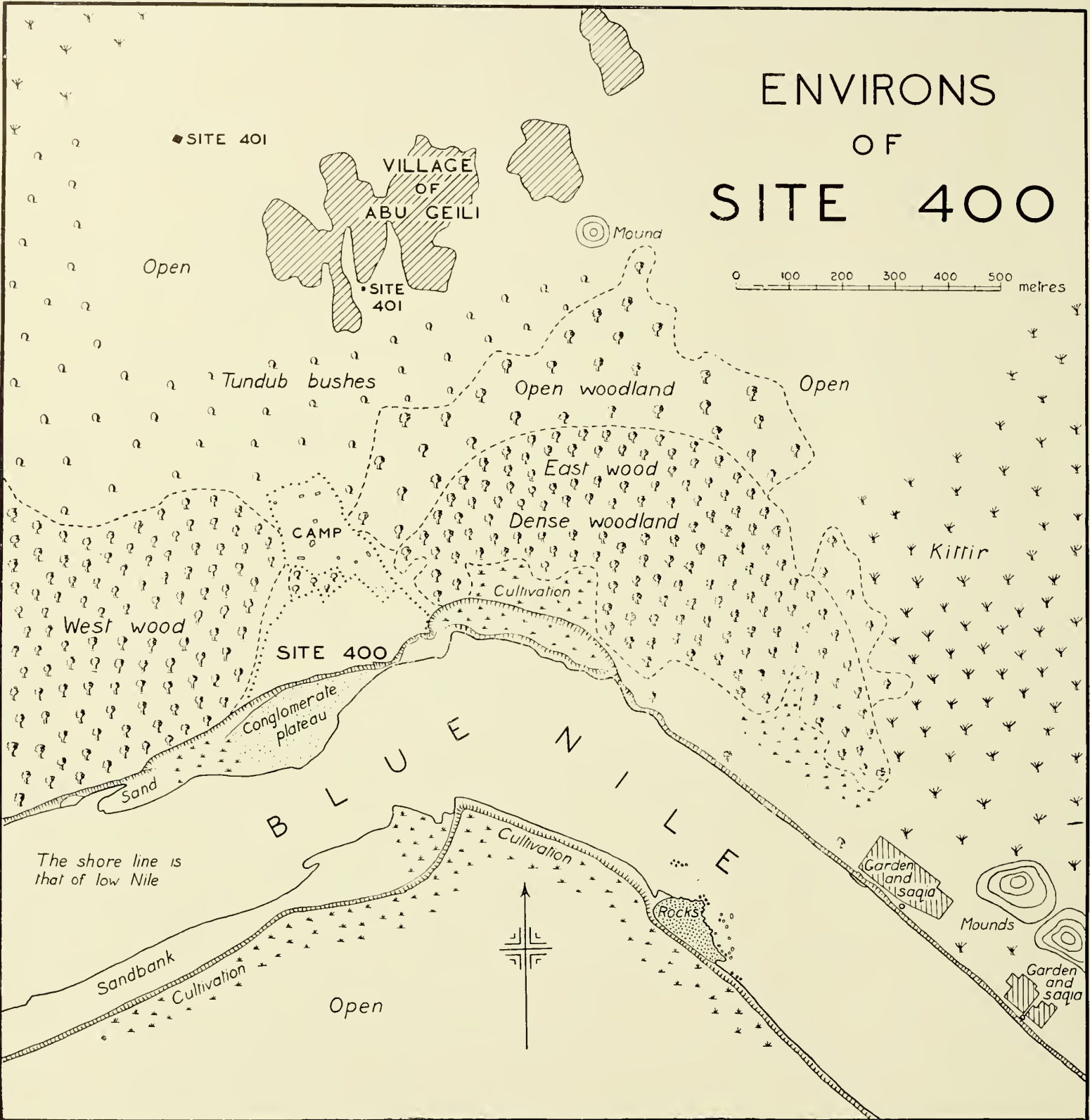
effect, is what his projected scheme of excavation amounted to—there might by now have existed a mass of material from which it would perhaps have been possible to obtain a much clearer picture of the history of the Sudan than that which we now possess. As it is, this record of what was found during the excavations Mr. Wellcome was able to begin is a contribution towards the foundation of fact on which the future historian will be able to build, whatever modification he may make in the tentative dating of the sites which is now offered.

PLATES

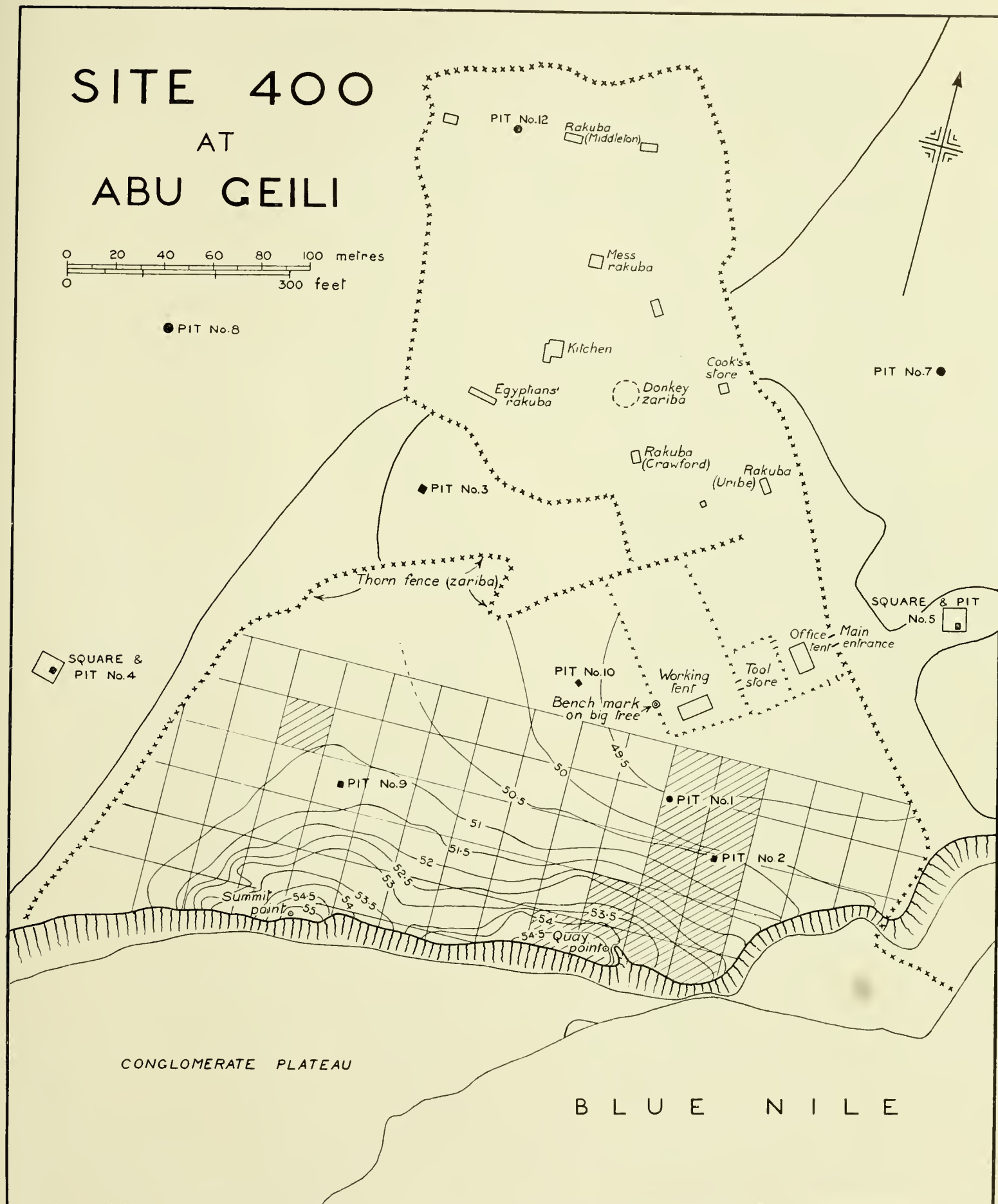


NOTE. Since the time of the excavation the name *Sennar* has been changed to *Sennar Junction* and *Makwar* has been changed to *Sennar*

ENVIRONS
OF
SITE 400



Scale 1:10,000



PLAN SHOWING CONTOURS AND 20-METRE SQUARES

Scale 1:2,000

ABU GEILI



PANORAMA OF SITE 400 BEFORE EXCAVATION BEGAN

It is built up from a series of photographs taken from a fixed point with the camera swinging round anti-clockwise from east to west. The right-hand edge of the lower photograph joins on to the left-hand edge of the upper



1. The eastern mound, before excavation
3. Clearing the site



2. The western mound, before excavation
4. The conglomerate plateau at low Nile



SITE 400



1. View of river bank near site 400



2. One of the Sudanese foremen employed on the site
See p. 6

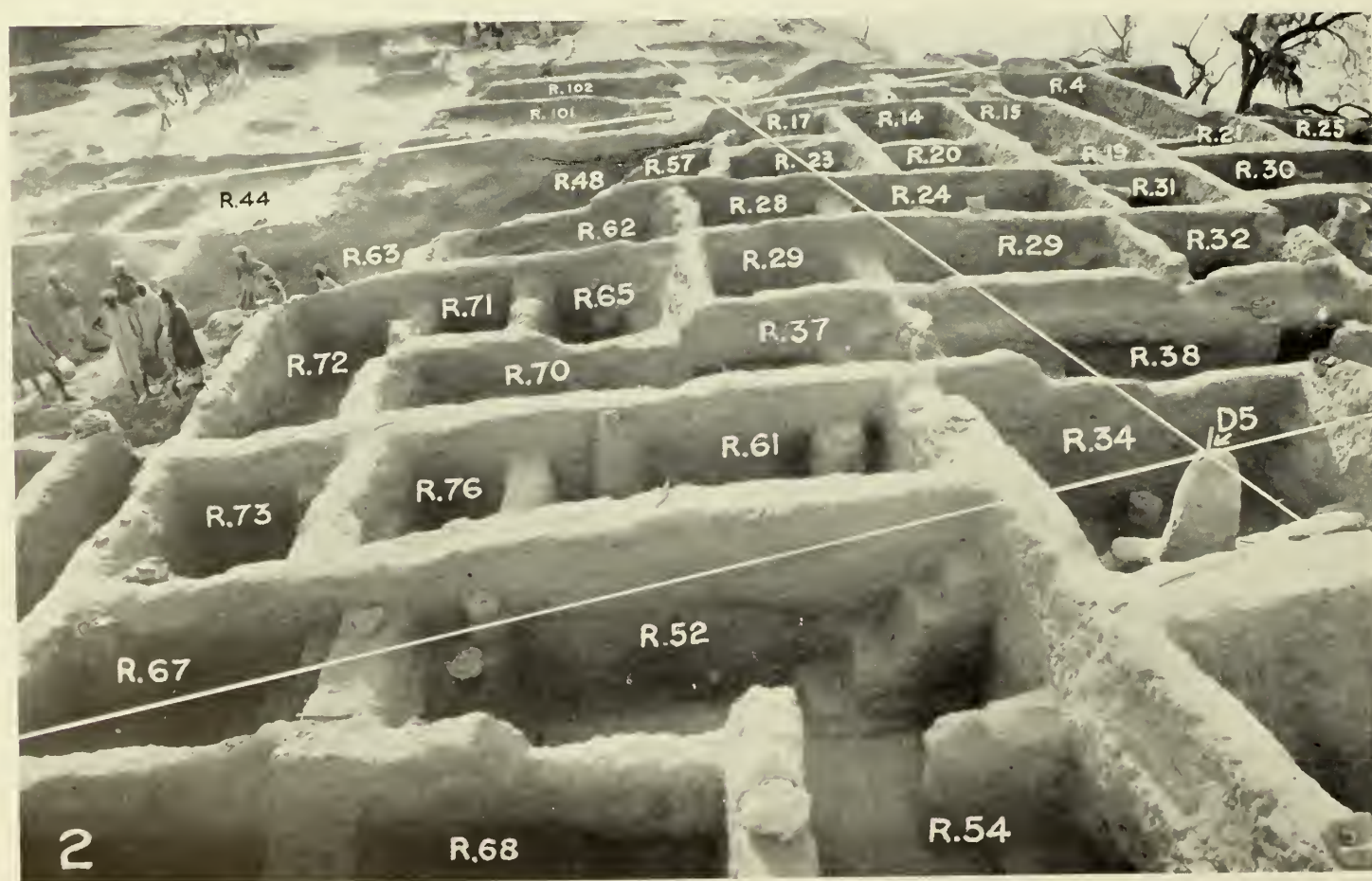


EXCAVATION IN PROGRESS ON SITE 400

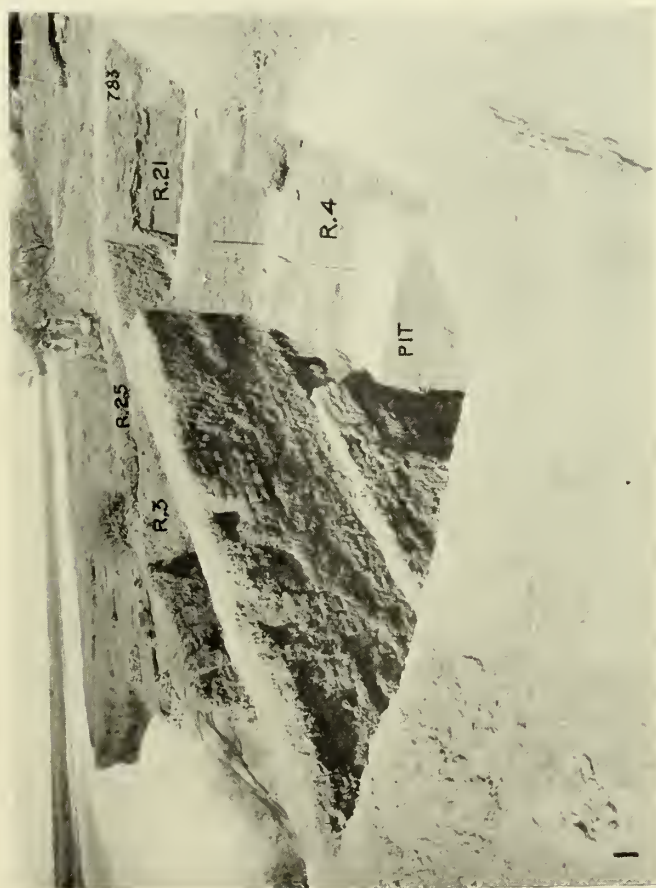
1. View looking south-west from square 1
2. View looking west-south-west across square 2
3. General view looking south on 21 February 1914, square 4 in foreground
4. Sifting machine on edge of cliff



1. General view of rooms partly excavated



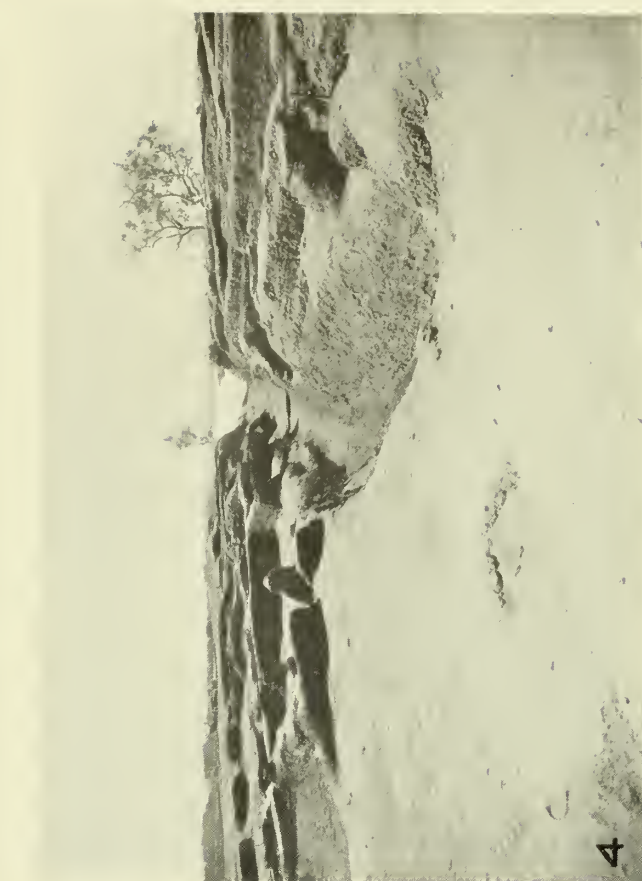
2. Rooms fully excavated; the steps in Room 52 show floor-levels



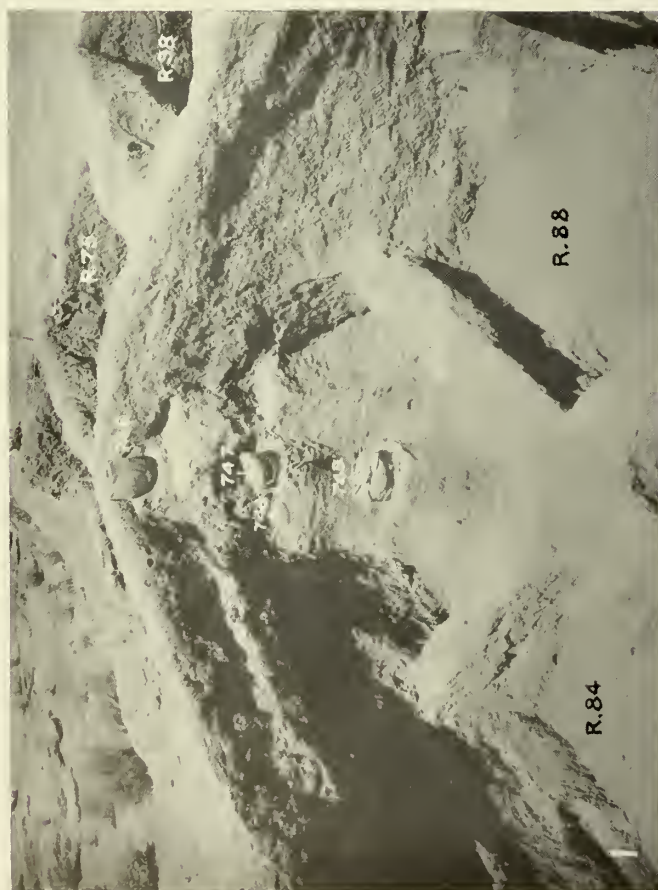
1. Room 4, showing red brick in wall and pit in floor
3. Room 54, looking north-west, showing floor-levels and pot O.C. 800



2. Room 114, looking south, showing pits in floor
4. Trench, looking south-east from square 5



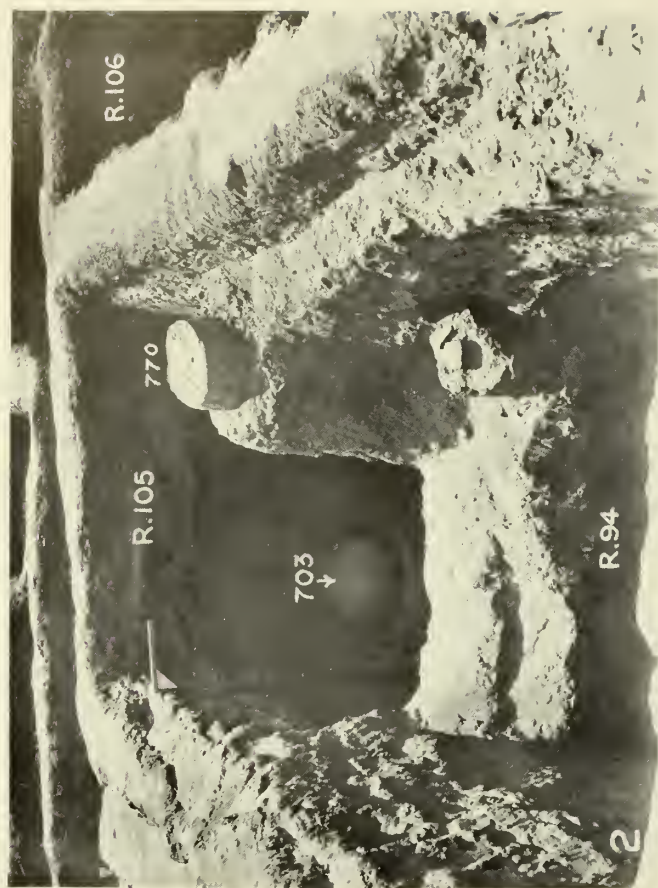
ABU GEILI



1. Pots *in situ* at different levels in corner of Room 60, looking south-west



3. Pit in floor of Room 26

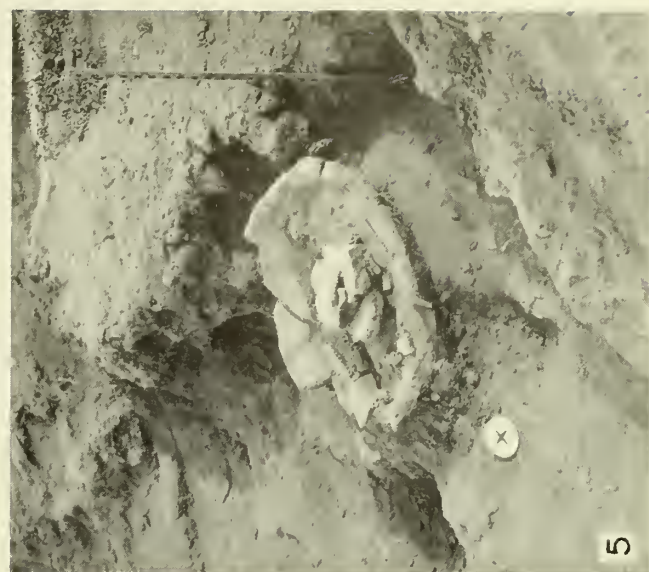
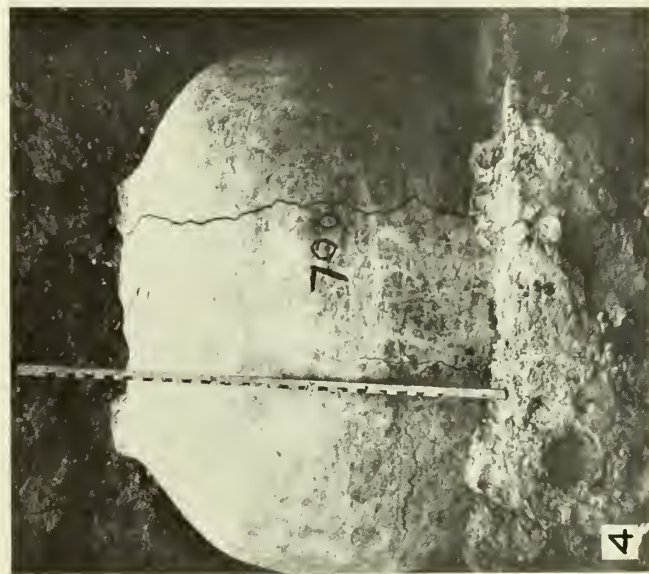
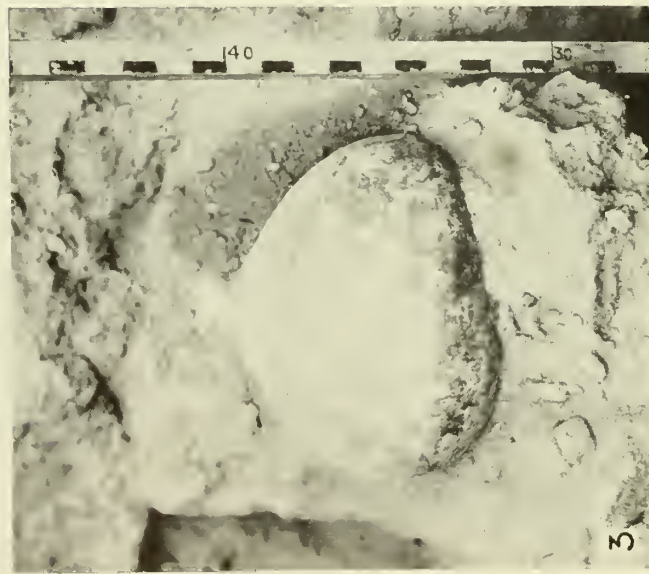
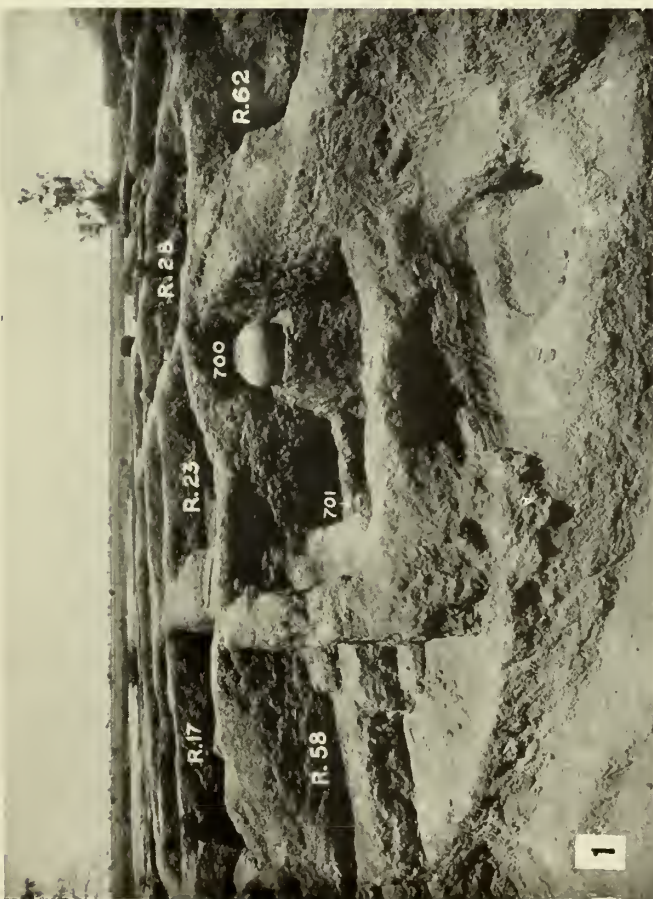


2. Pots, including large pot O.C. 703, *in situ* in Room 105, looking east



4. View of pots O.C.s 741 and 742 *in situ* in pit

ABU GEILI



1 & 2. Showing position of O.C.s 700, 701

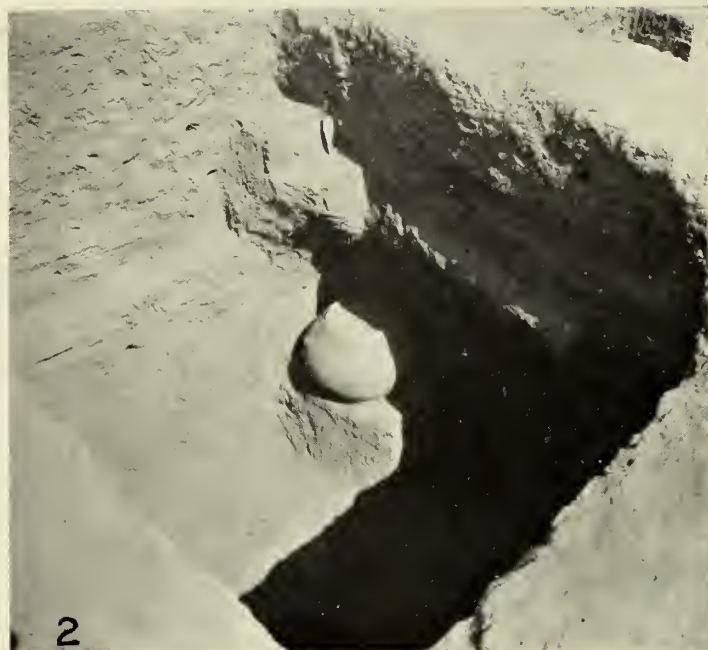
POTS *in situ*
3. O.C. 701

4. O.C. 700

5. Remains of O.C. 726



1. Large pot O.C. 702 *in situ* in Room 31, looking south-east



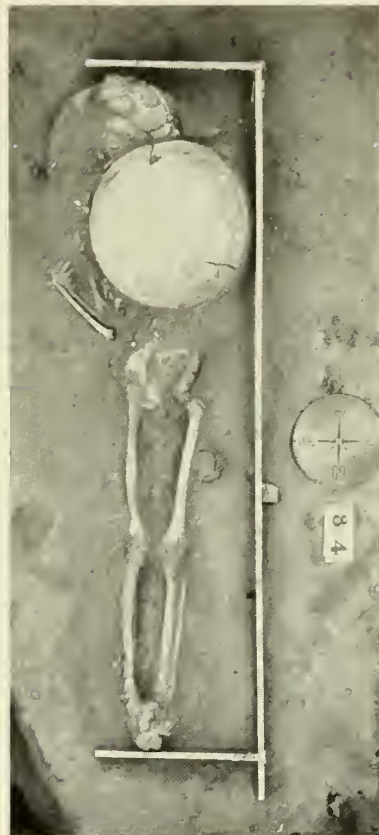
2. Large pot O.C. 781 *in situ* in Room 19, looking north-west



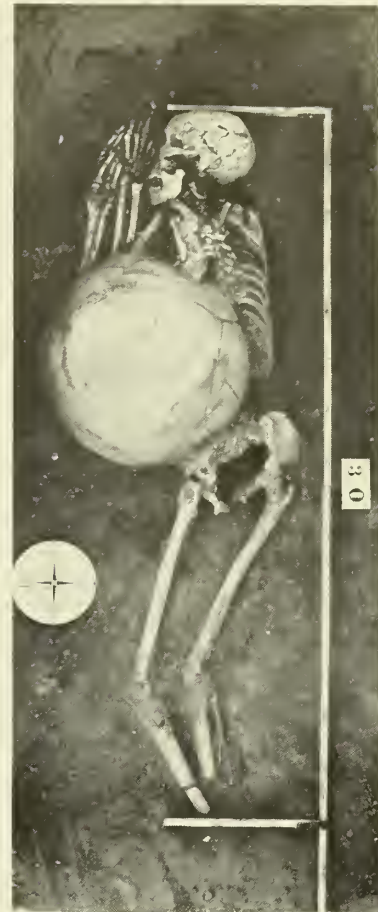
3. Querns in Room 35, looking south-east



1



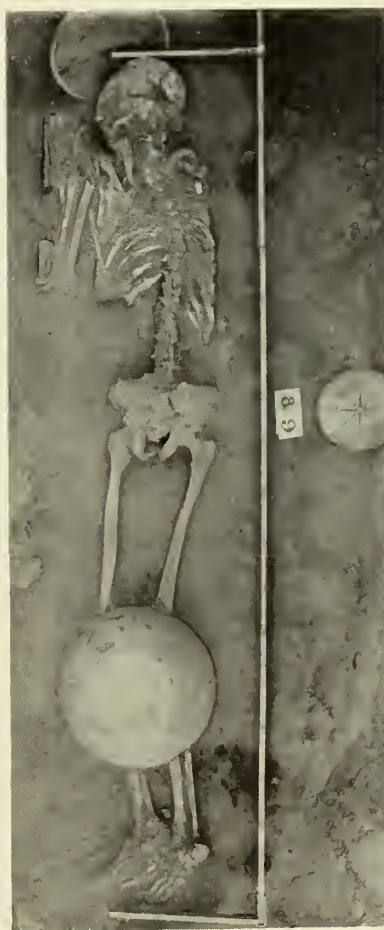
2



3



4



5

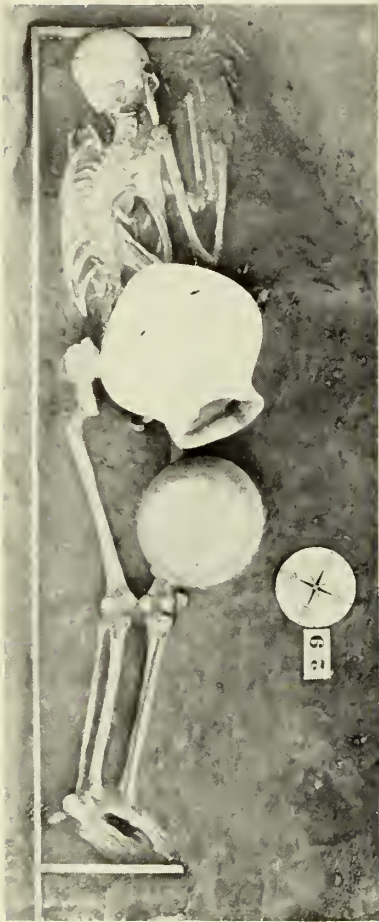


6

Photographs of graves showing bowls *in situ*



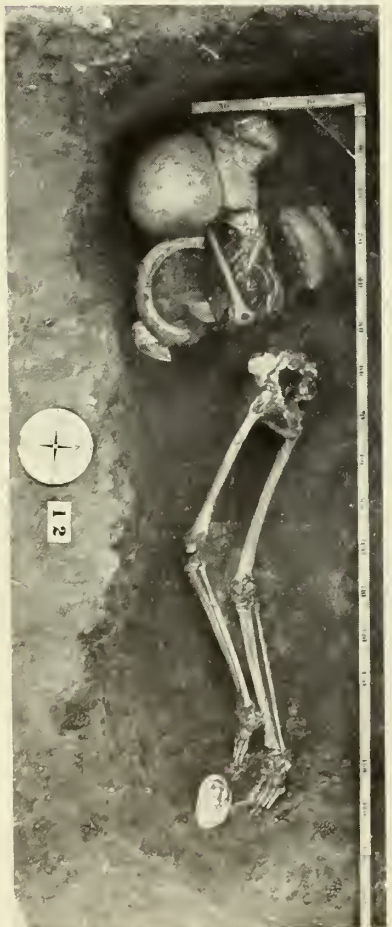
1



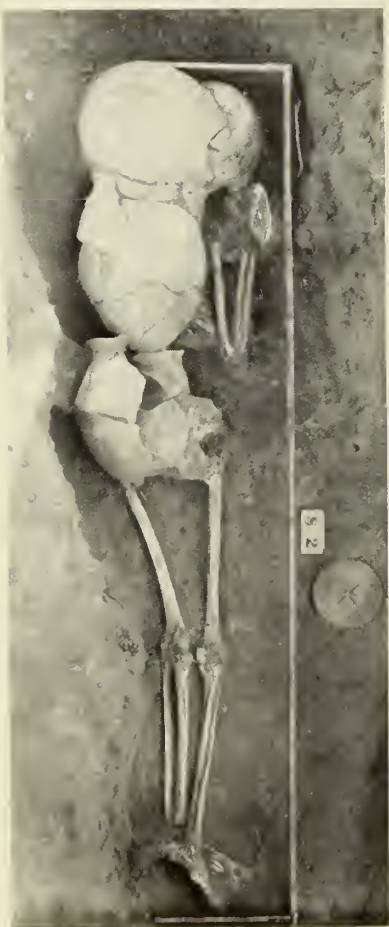
2



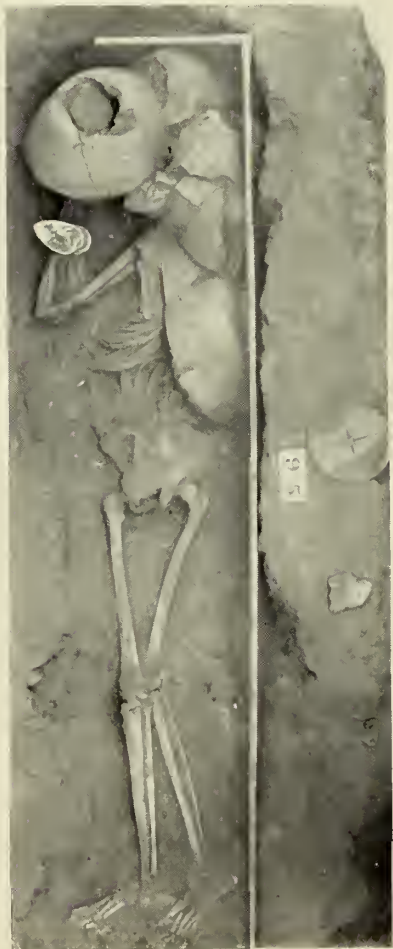
3



4

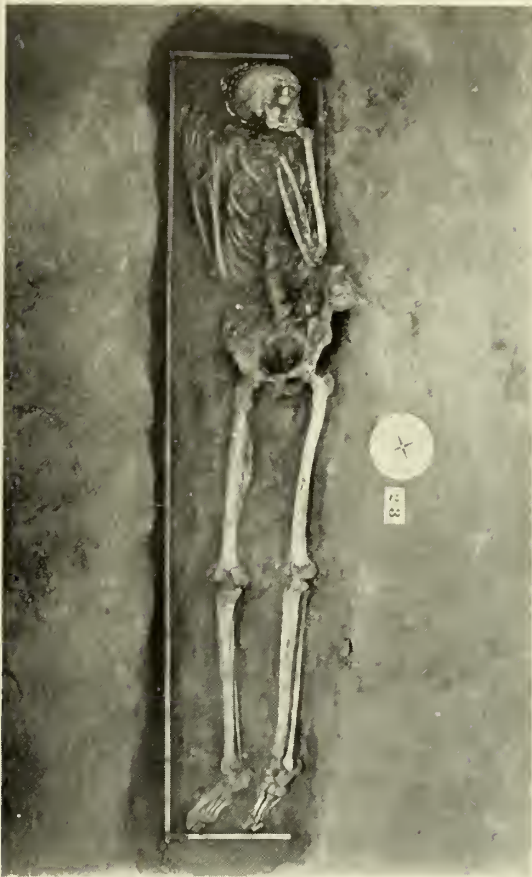


5



6

Photographs of graves showing bowls and jars *in situ*



1. Grave 400/23



2. Detail of upper part of 400/23 showing iron bracelet and cowries (? from helmet) *in situ*



3. Grave 400/27



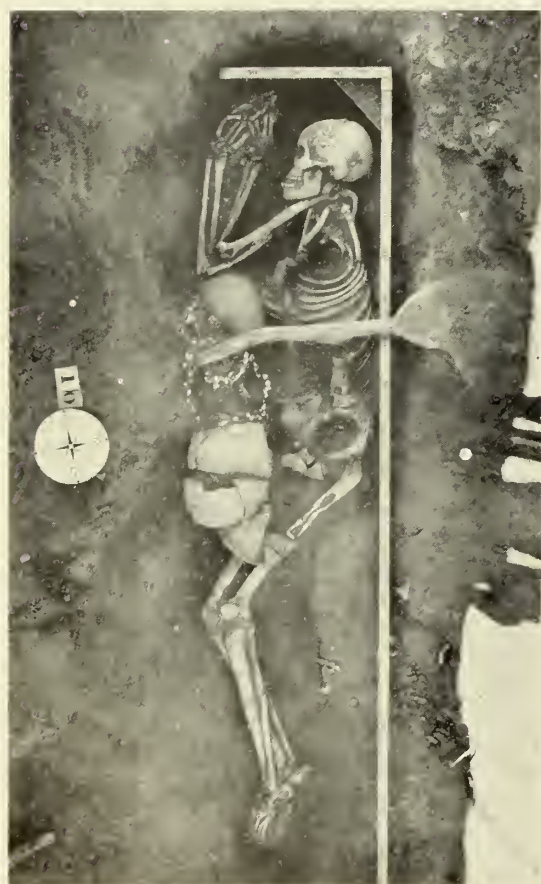
4. Detail of upper part of 400/27 showing iron spear-head, iron axe-head, and girdle of cowries *in situ*



1. Grave 400/5



2. Grave 400/5. Enlargement showing iron knives at elbow (indicated by arrow)



3. Grave 400/10



4. Grave 400/10. Detail of small glass bottle



1. Square GA, 4-5 looking north-east
3. Square GA, 4-5 looking south-east



2. Square GA, 4-5 looking south-east
4. Square GA, 4-5 looking west

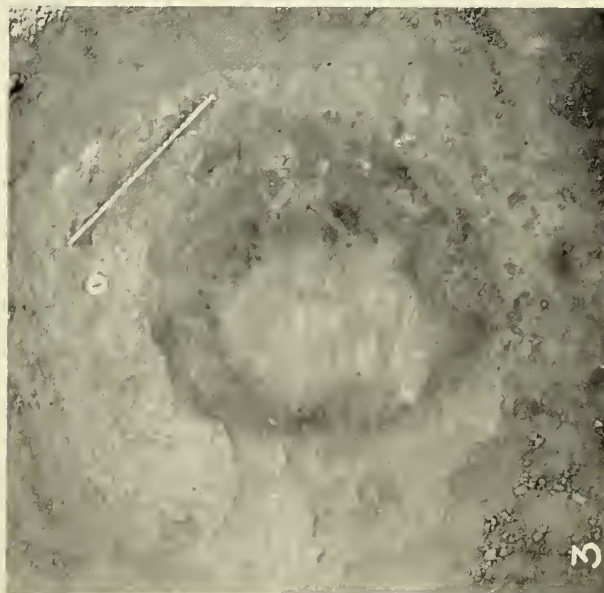
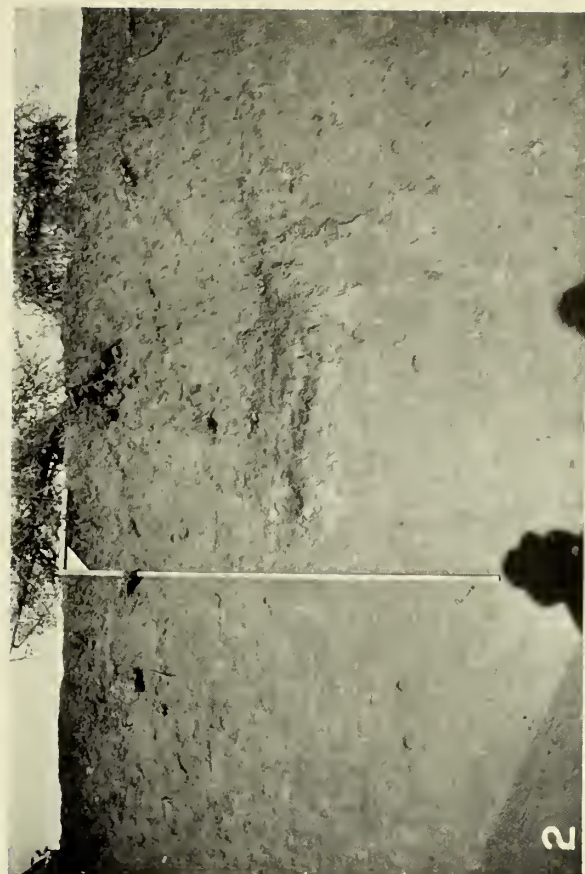


ABU GEILI



1. Square GA, 3-4 looking south-west
3. Square AB, 3-4 looking north-east

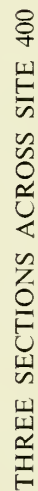
2. Square GA, 3-4 looking south-east
4. Square AB, 3-4 looking north, grave 400/82 in gap; north wall of square GA, 3-4, showing floor, visible through gap



1. Square AB, 4-5 looking north, showing fire-places in wall
2. Square AB, 4-5 looking west-south-west, showing fire-place in wall
3. Fire-place 1 in square BC, 4-5
4. Fire-place 2 in square BC, 4-5
5. Fire-place in Room 19



PLAN OF GRAVES IN SQUARE 16. 1:100

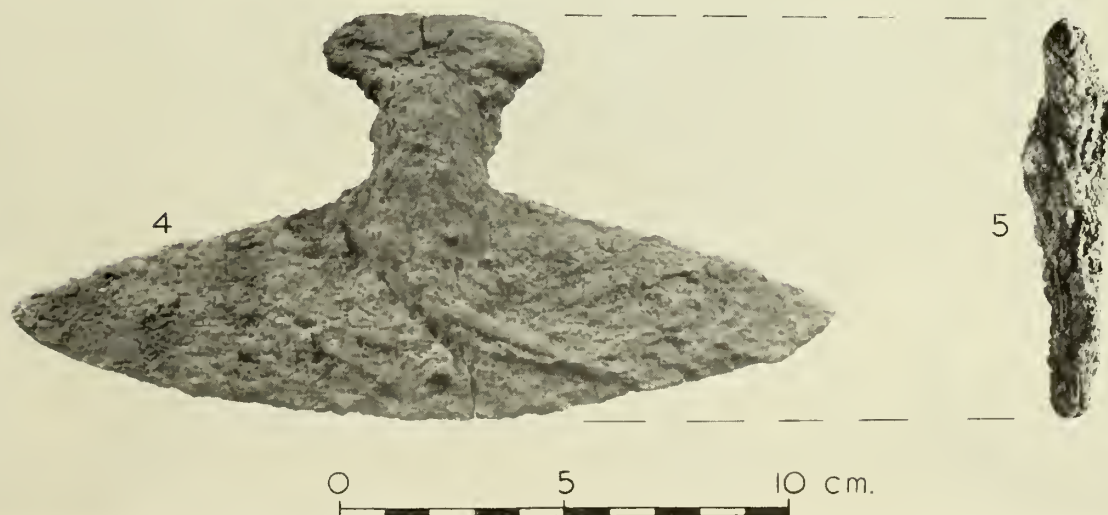
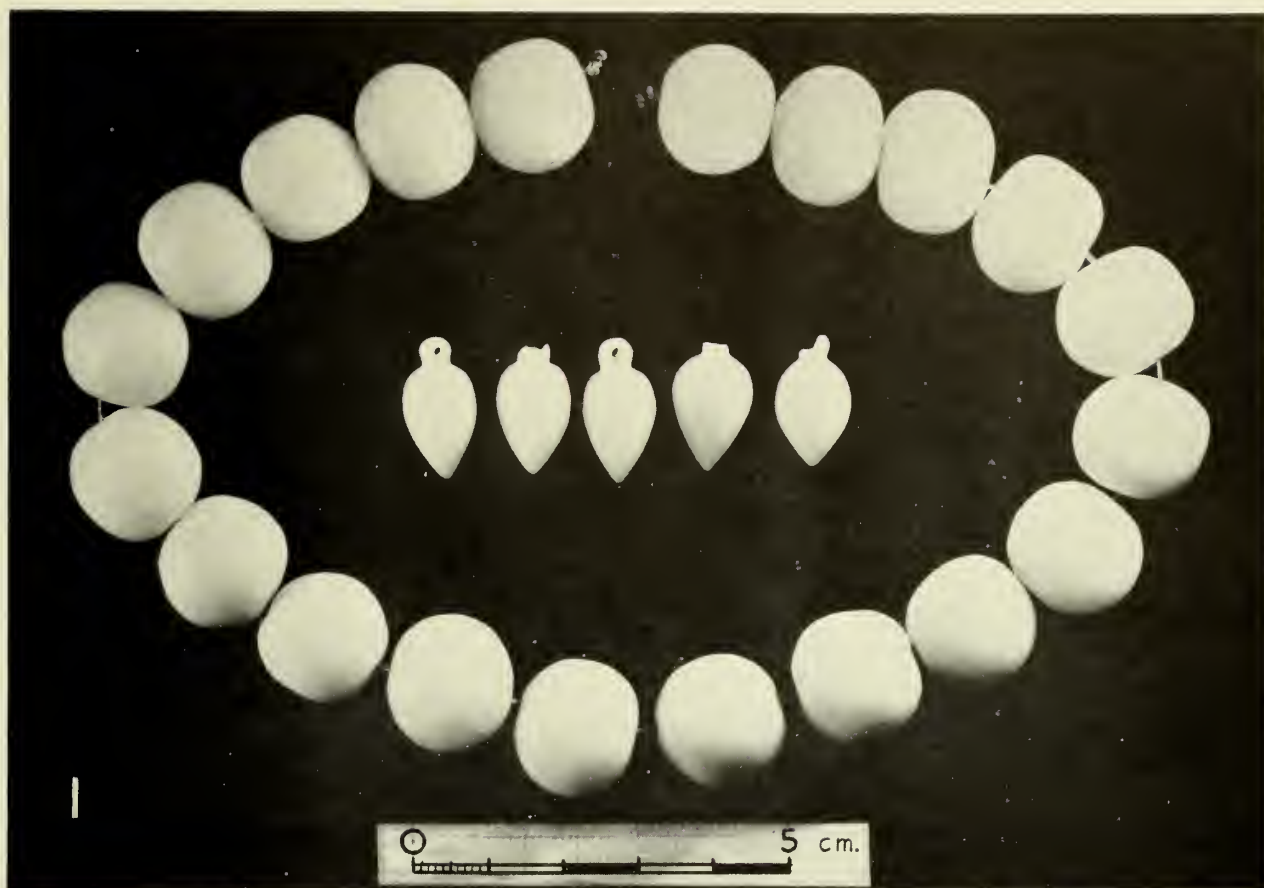




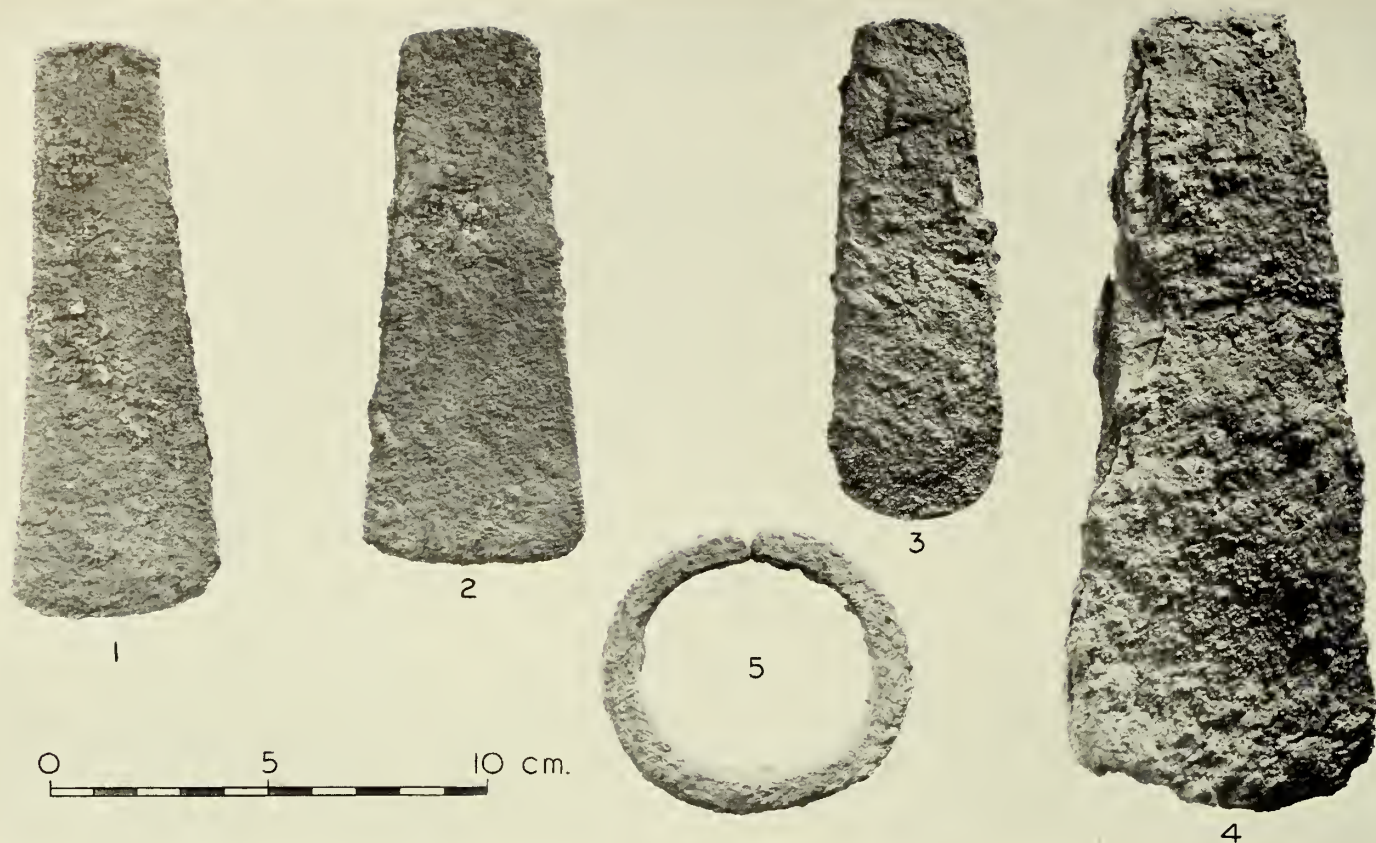
A. Grave 400/100 as excavated



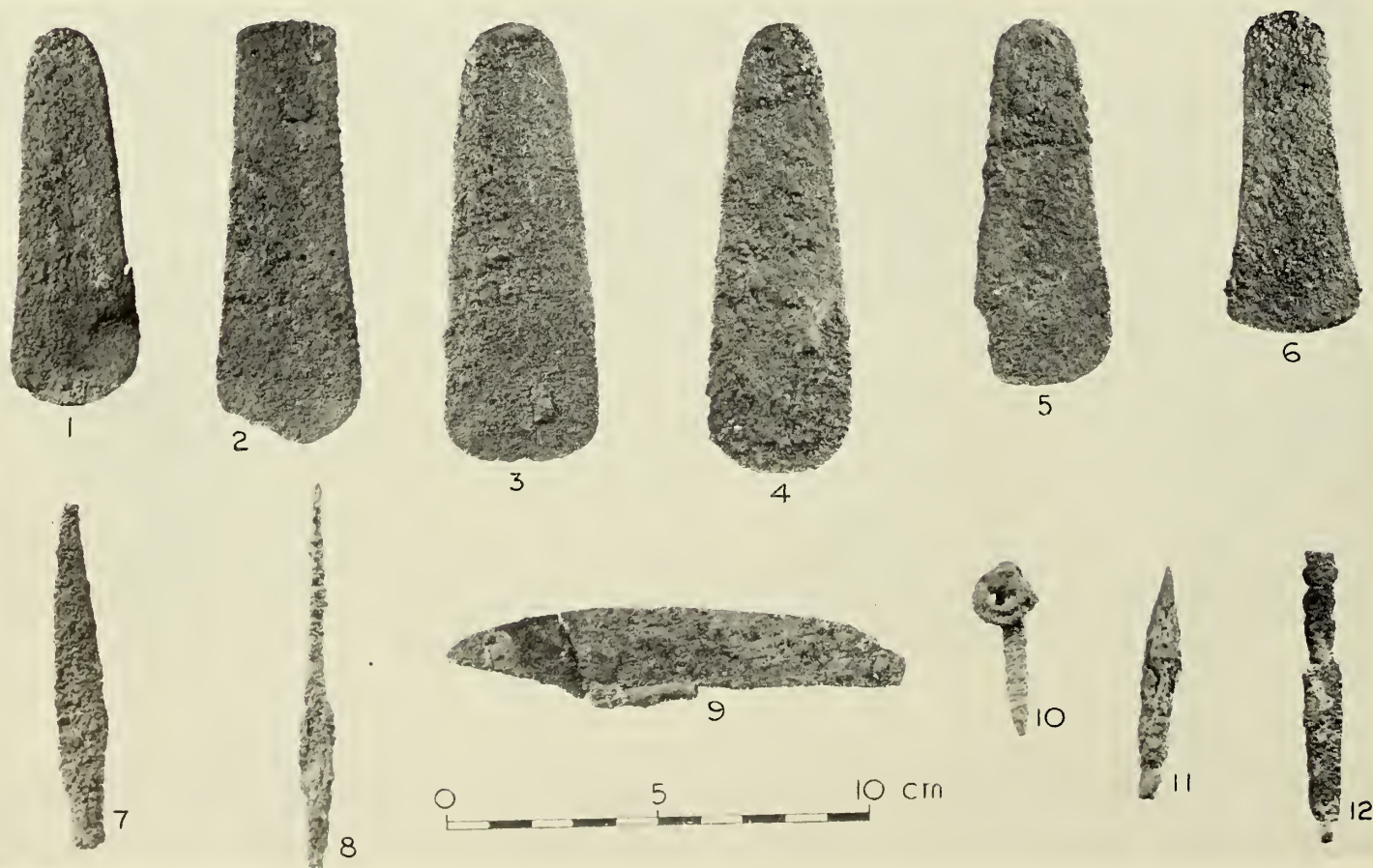
B. Pottery vessels from grave 400/100
See pp. 30, 37



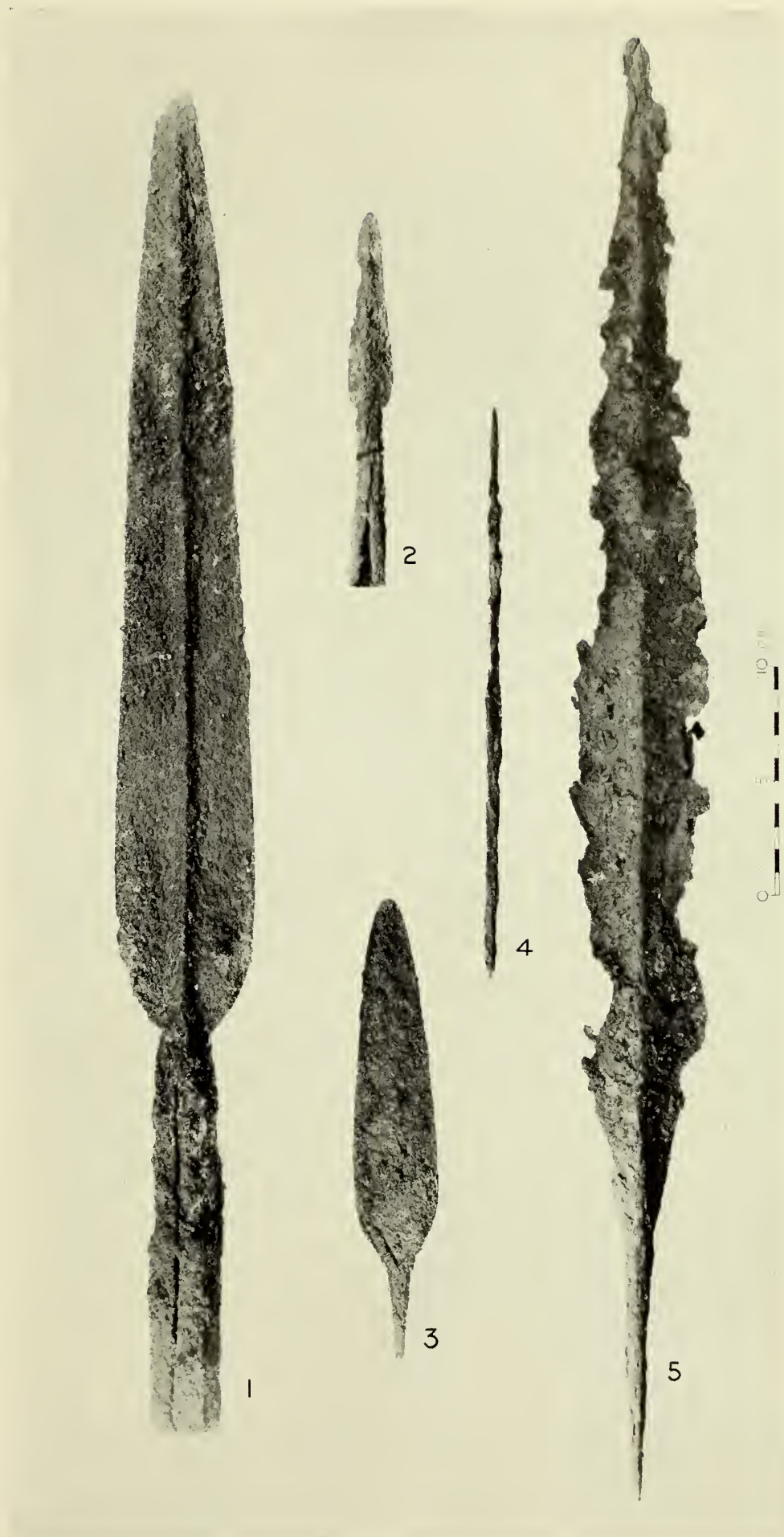
Beads, bracelets, and hoe (?) from grave 400/100
 See pp. 38, 74, 86



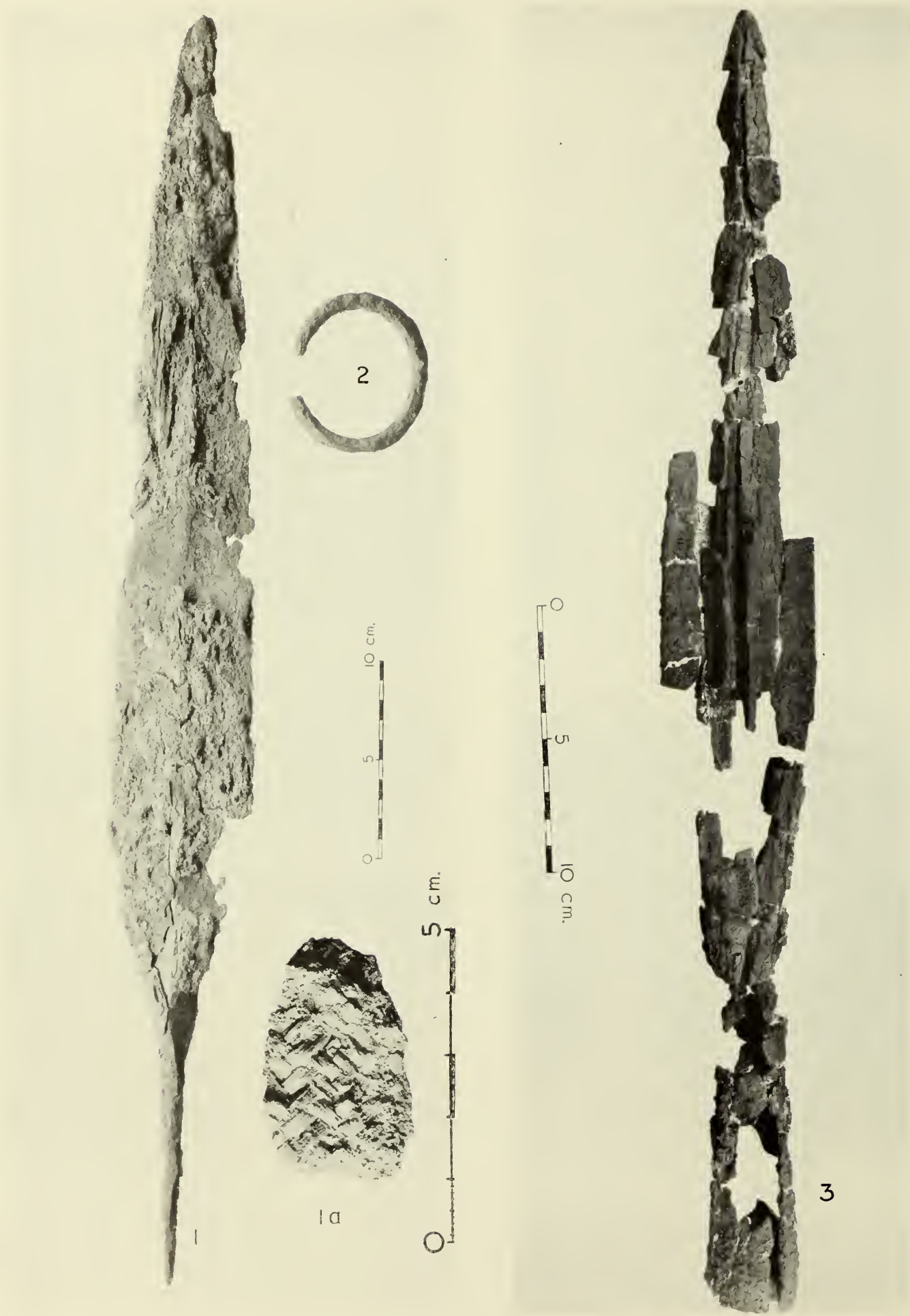
A. Iron axe-heads, type II; iron bracelet



B. Iron axe-heads, type I; knives, &c.
IRON OBJECTS FROM FUNG GRAVES
See pp. 33, 38



Iron spear-heads from Fung graves
See pp. 32, 38



Iron spear-heads from Fung graves
See pp. 33, 38



Pot types. 1:6

See pp. 54, 55



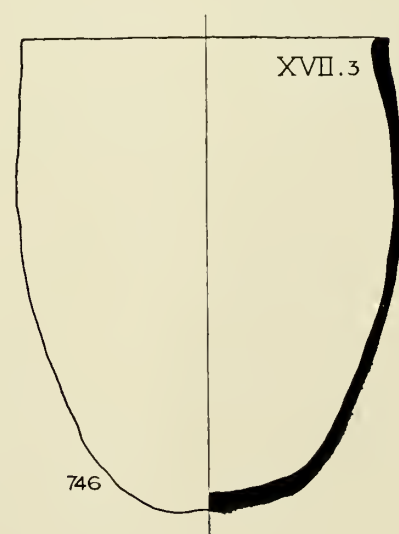
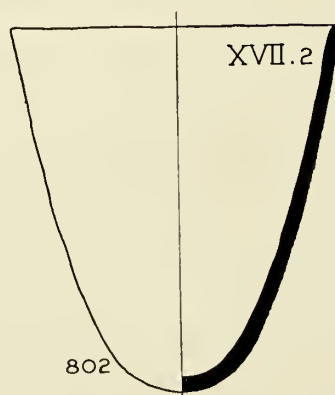
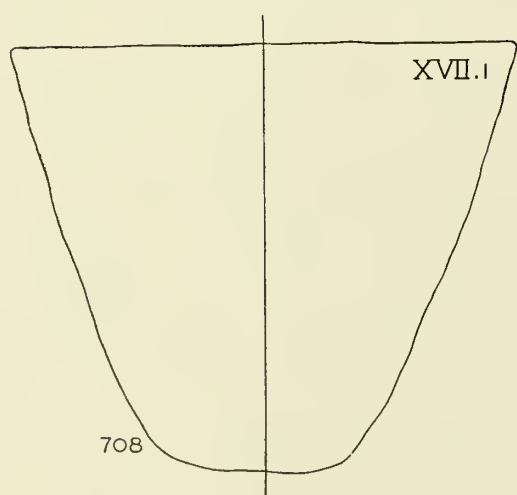
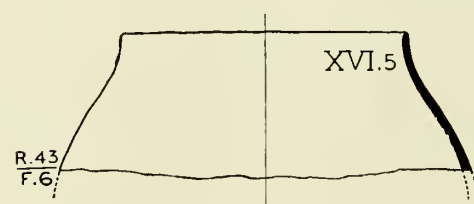
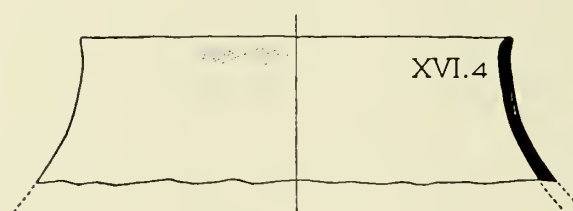
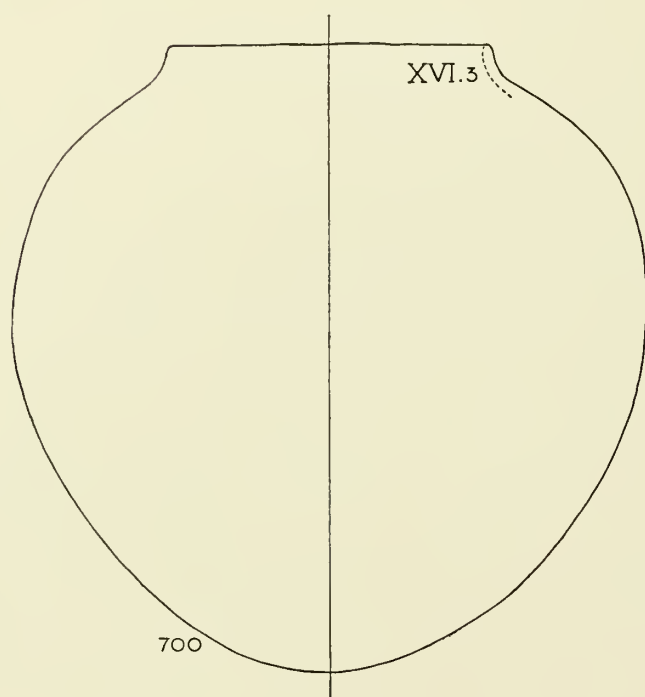
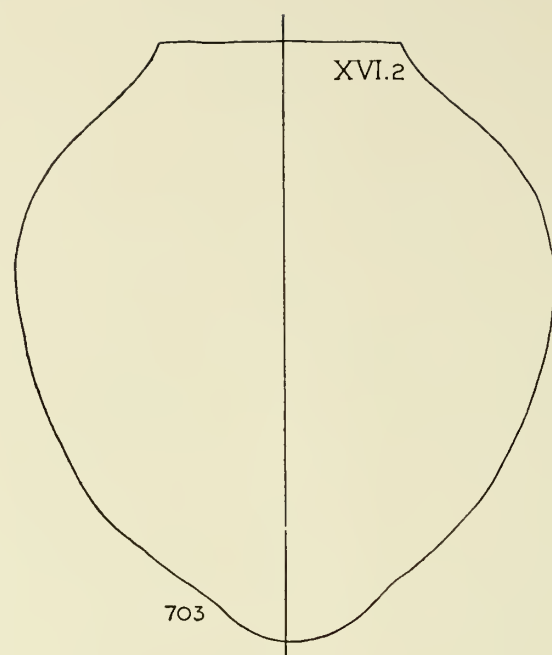
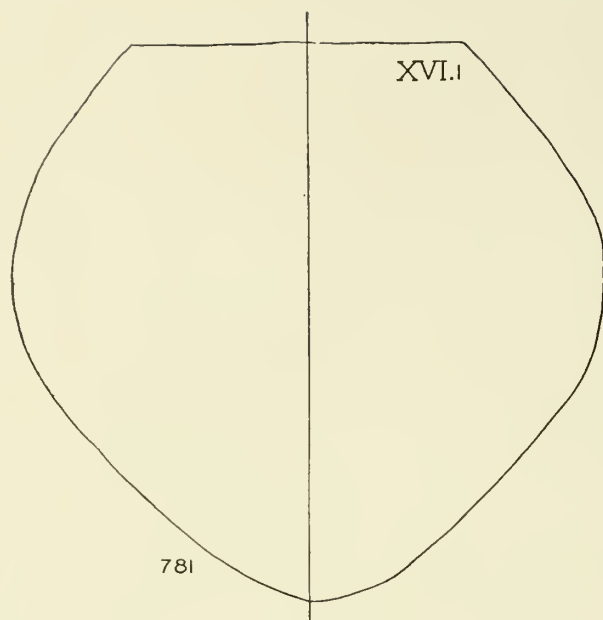
Pot types. 1:6

See pp. 55, 56



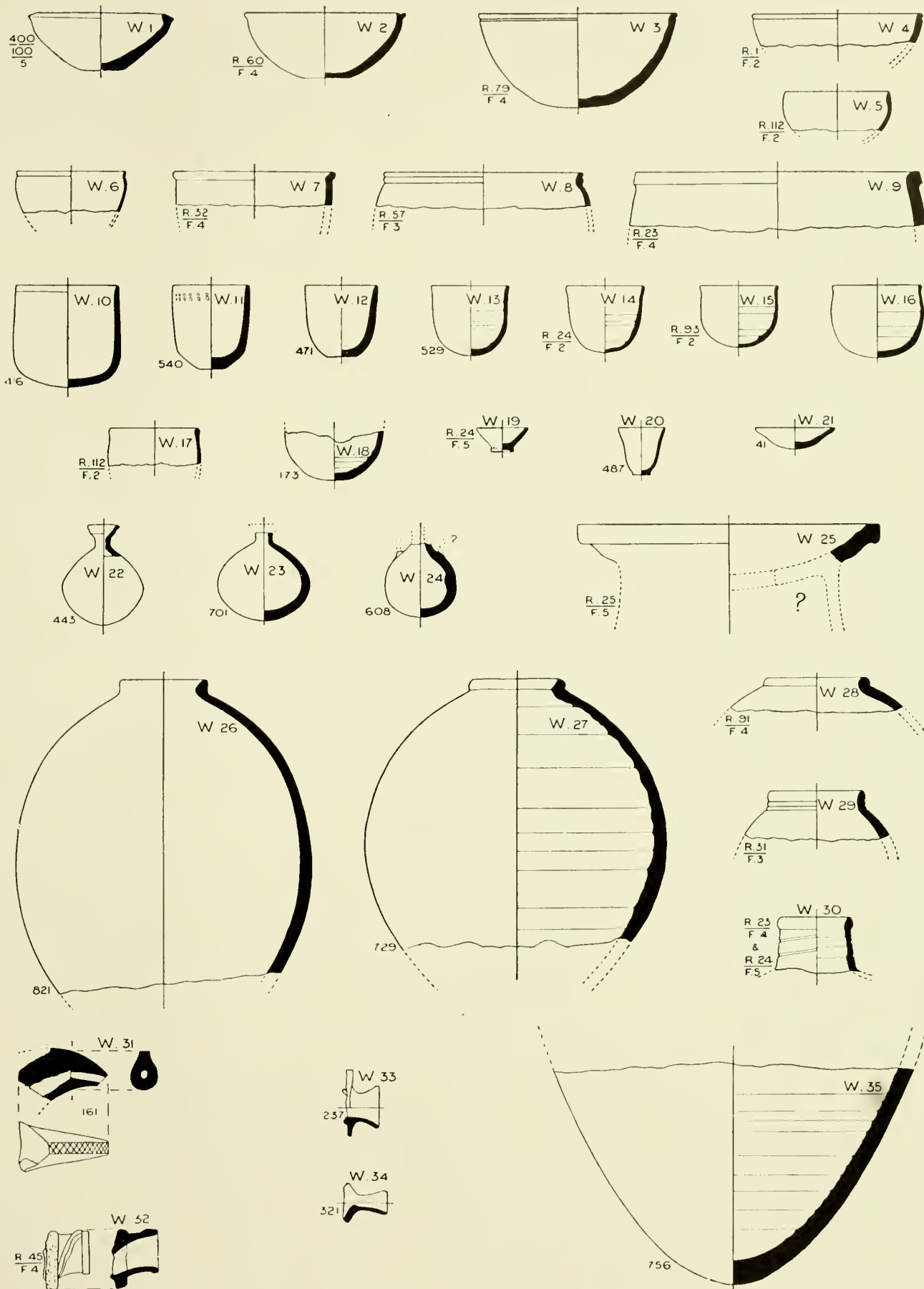
Pot types. 1:6

See pp. 56, 57

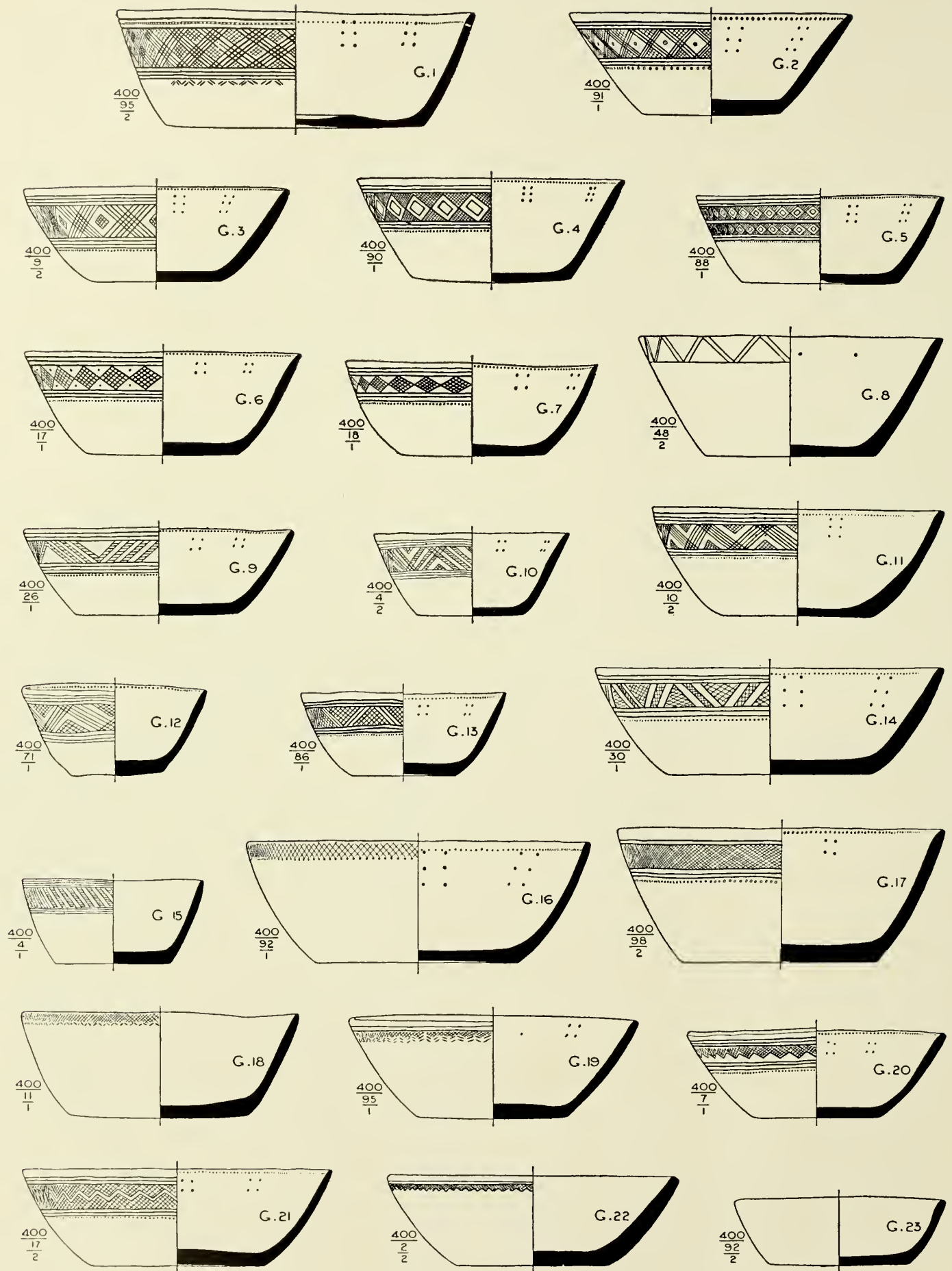


Pot types. 1:8

See p. 58

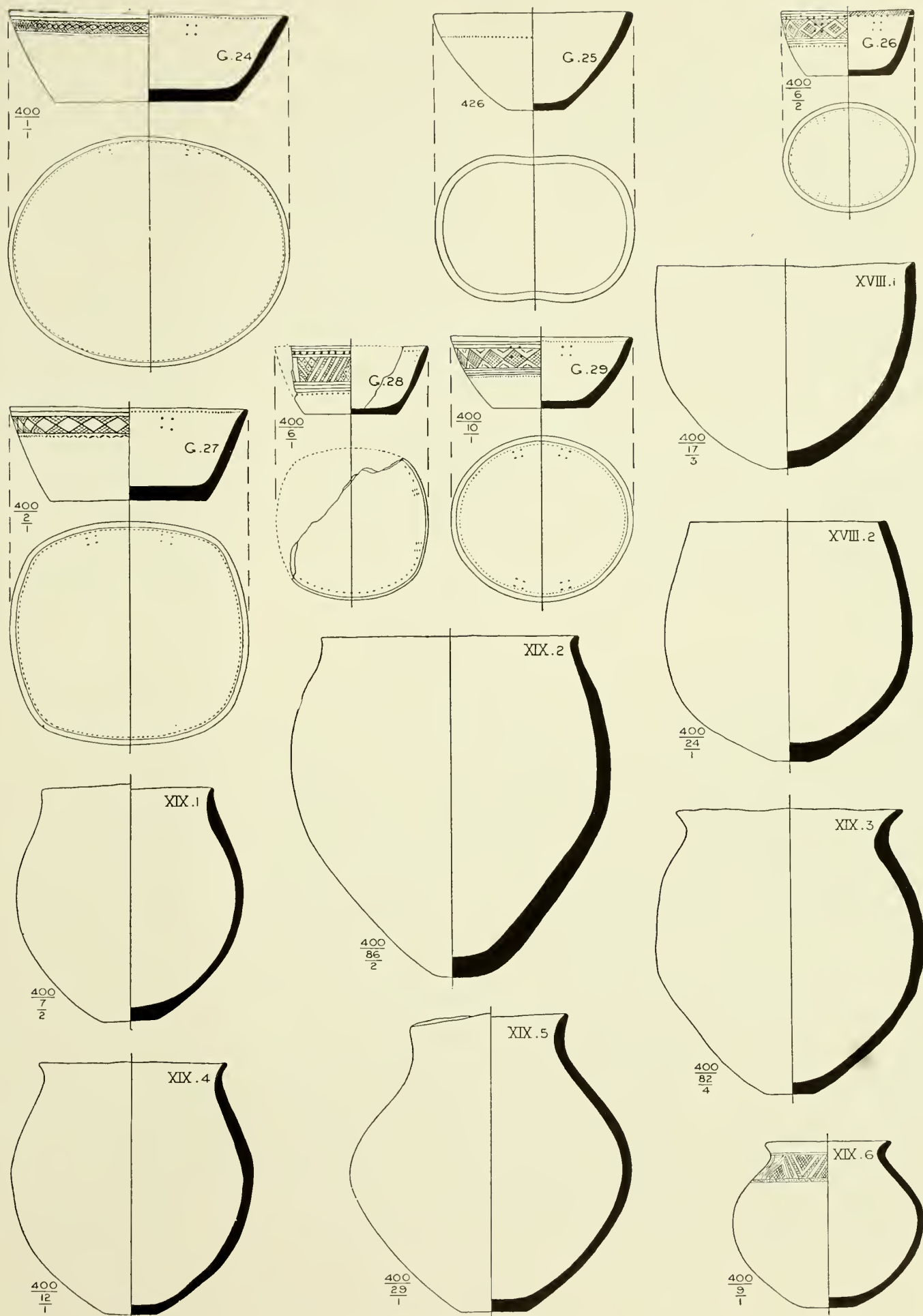


Pot types, wheel-made. 1:6
See p. 58



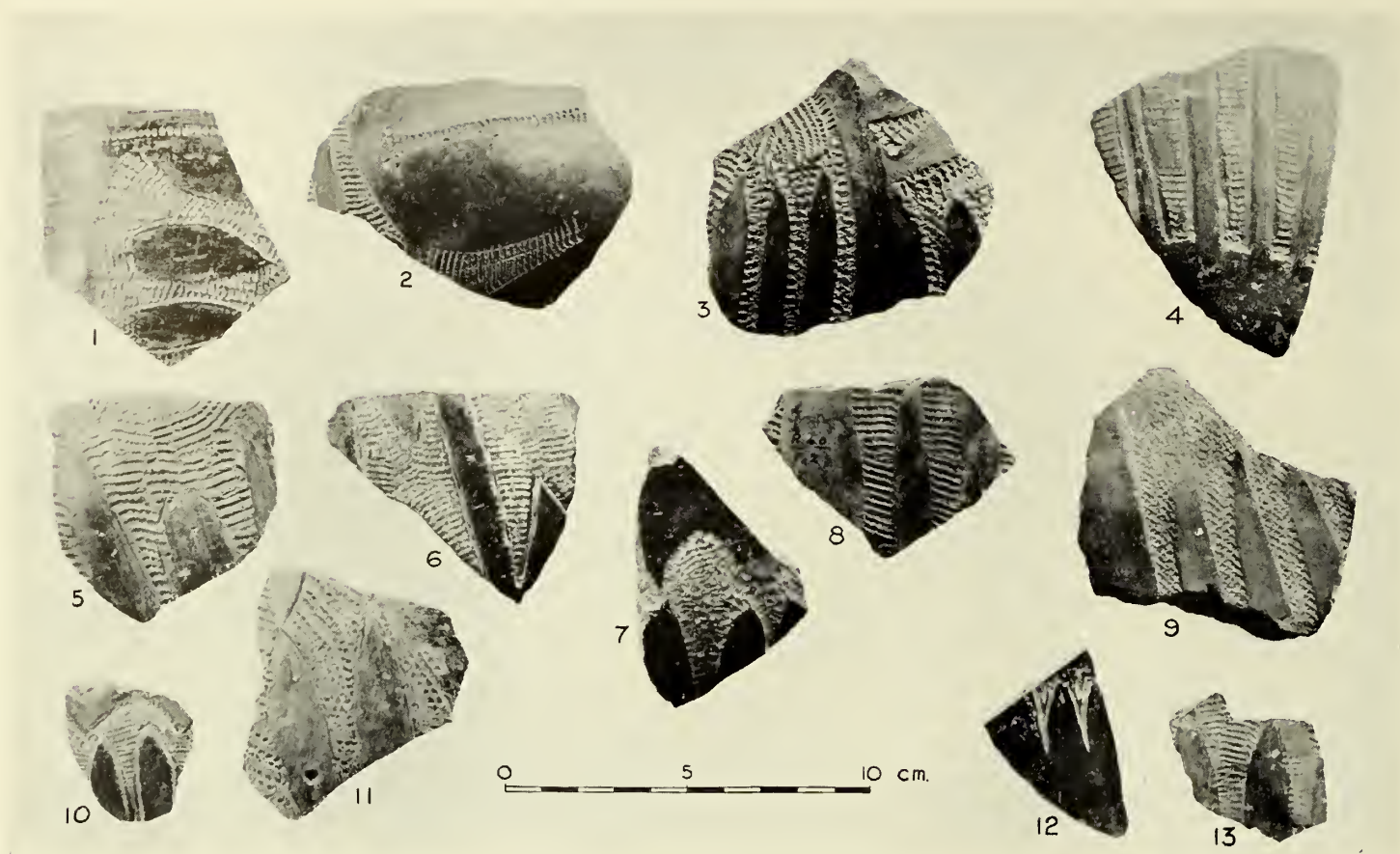
Pot types from Fung graves. 1:6

See pp. 59, 60

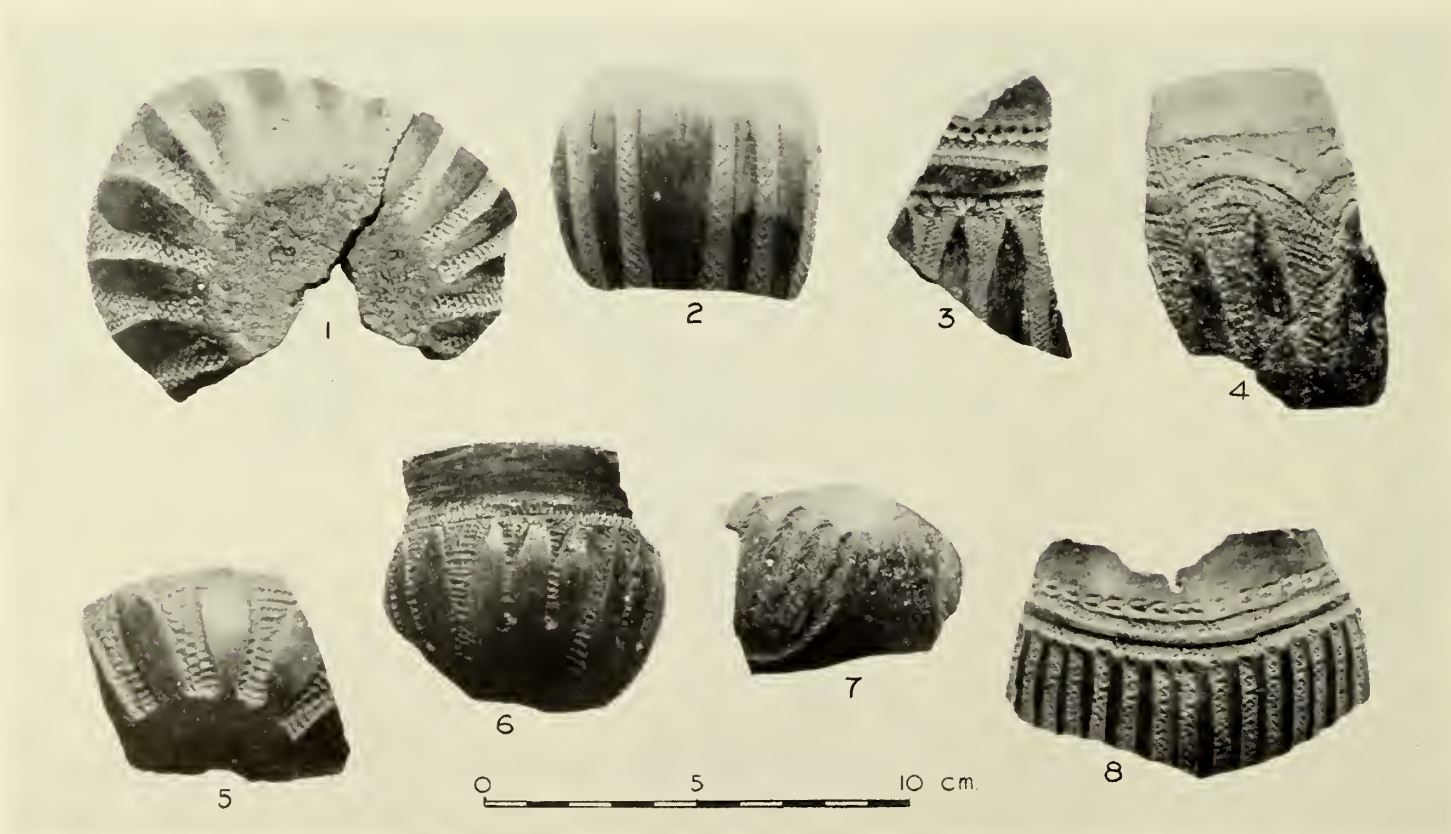


Pot types from Fung graves. 1:6

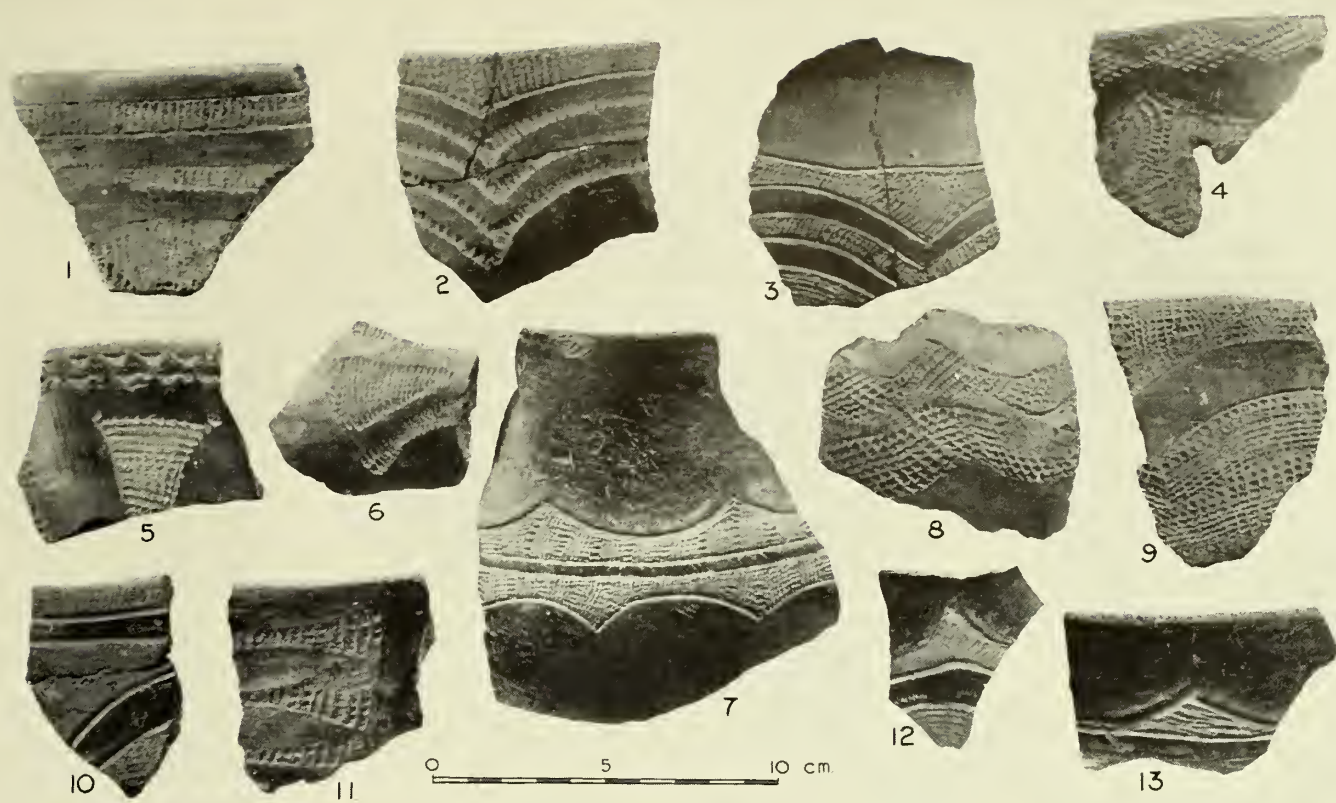
See p. 60



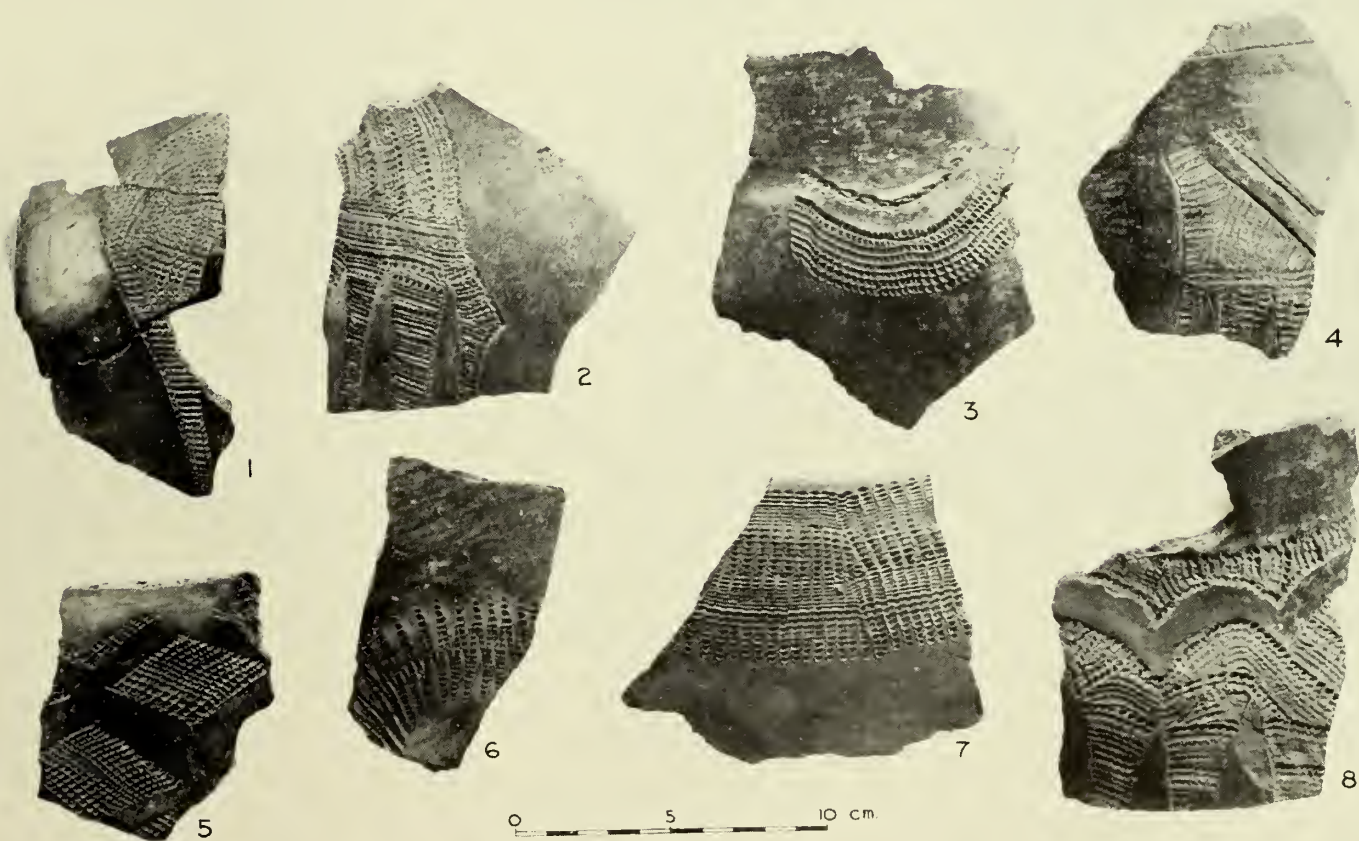
A. Miscellaneous fragments



B. Fragments of small bowls
DECORATED POTSDERDS
See p. 60

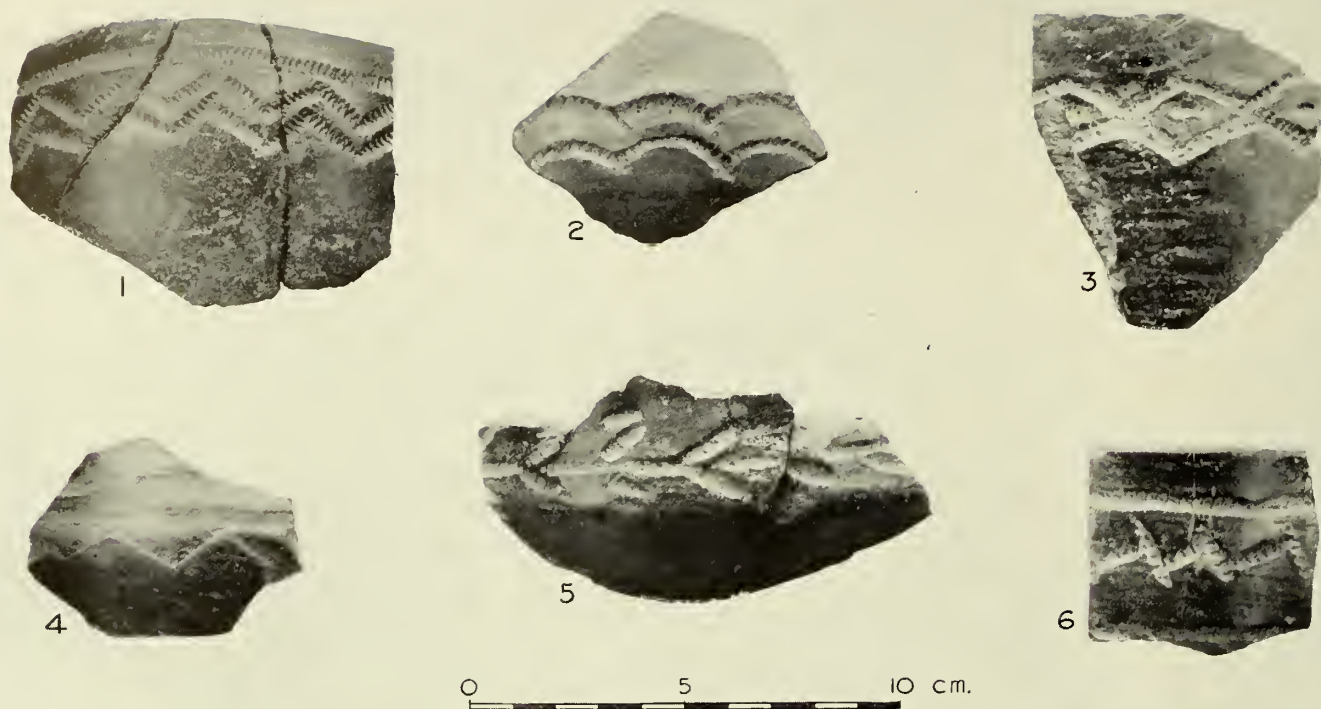


A. Miscellaneous fragments

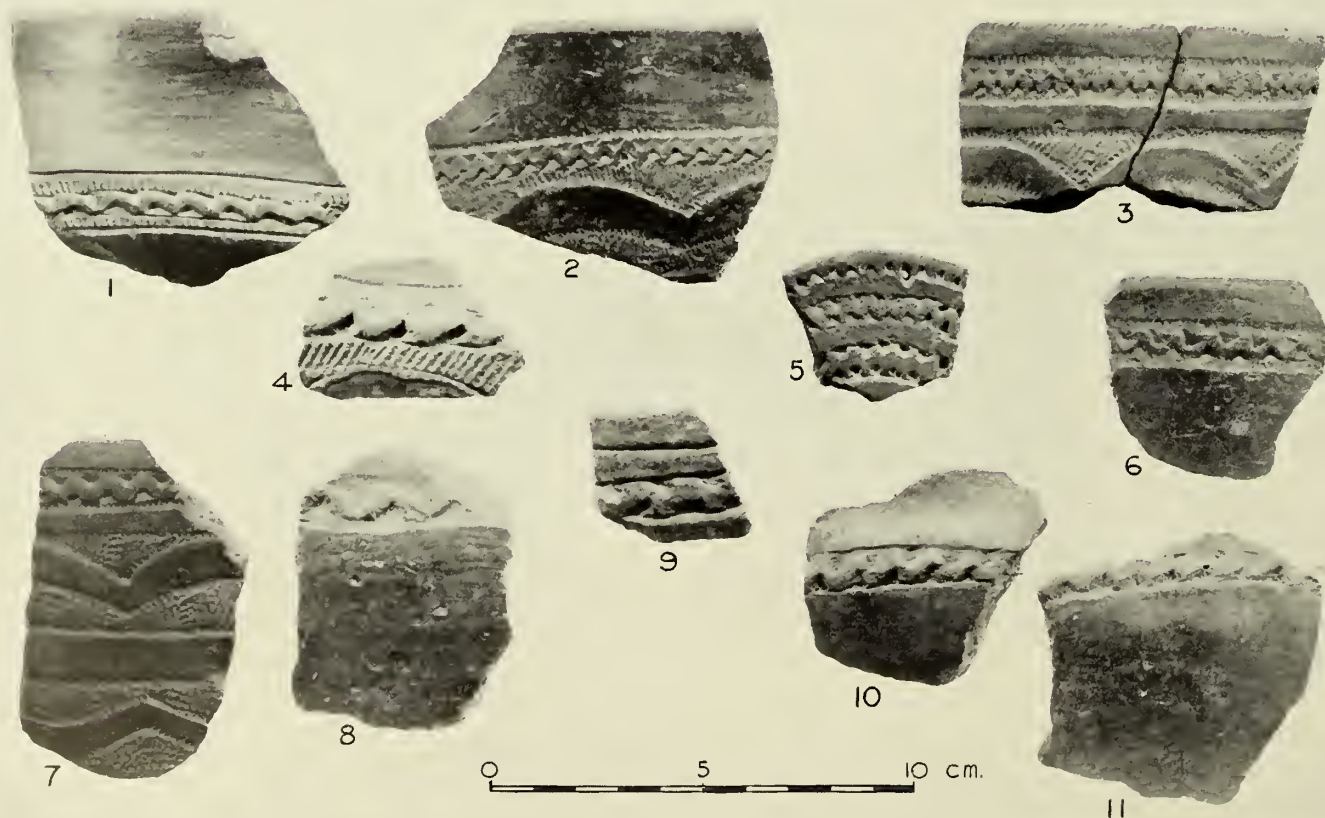


B. Fragments of large vessels
DECORATED POTSHERDS

See p. 61



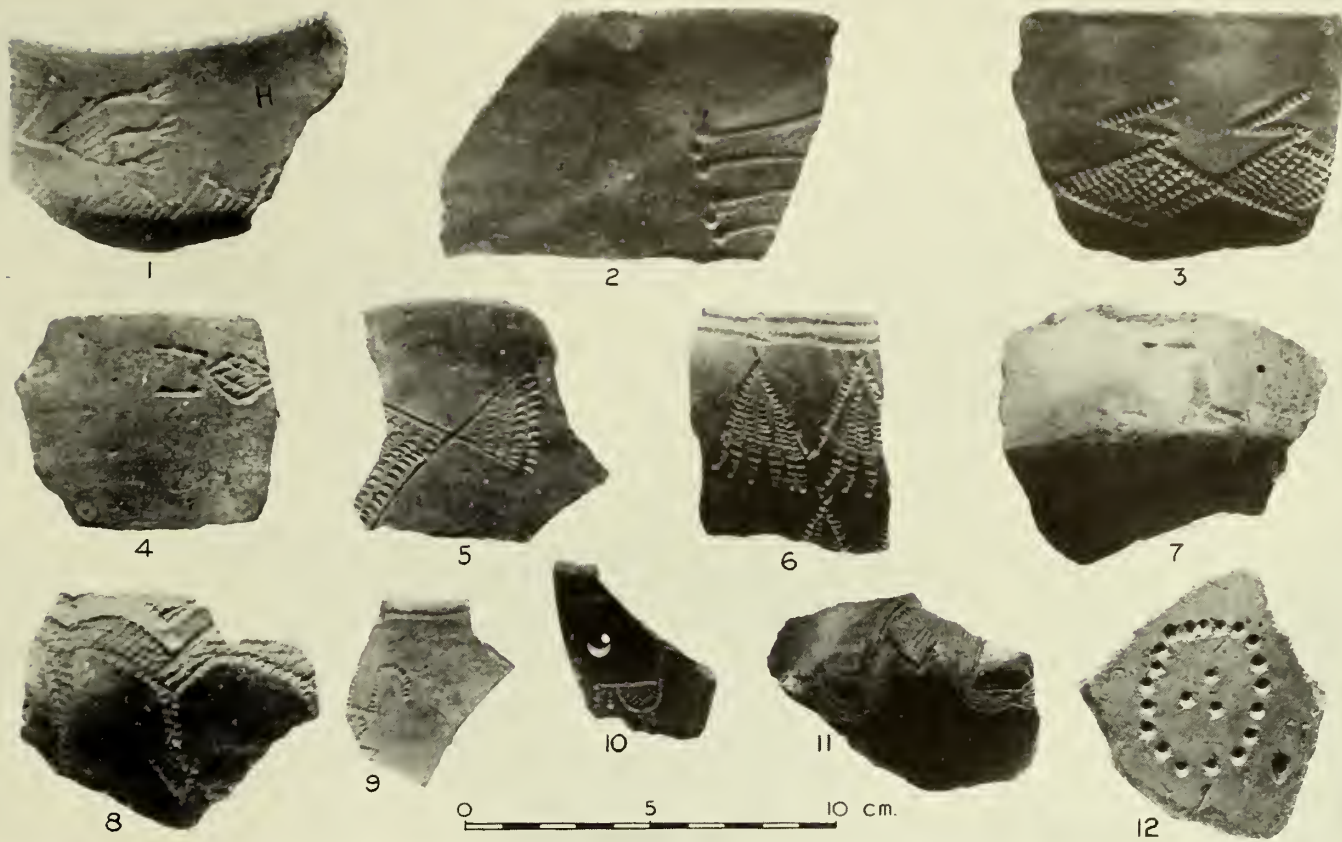
A. Fragments decorated by means of pottery 'rockers'



B. Fragments decorated in zigzag false relief

DECORATED POTSHERDS

See p. 61



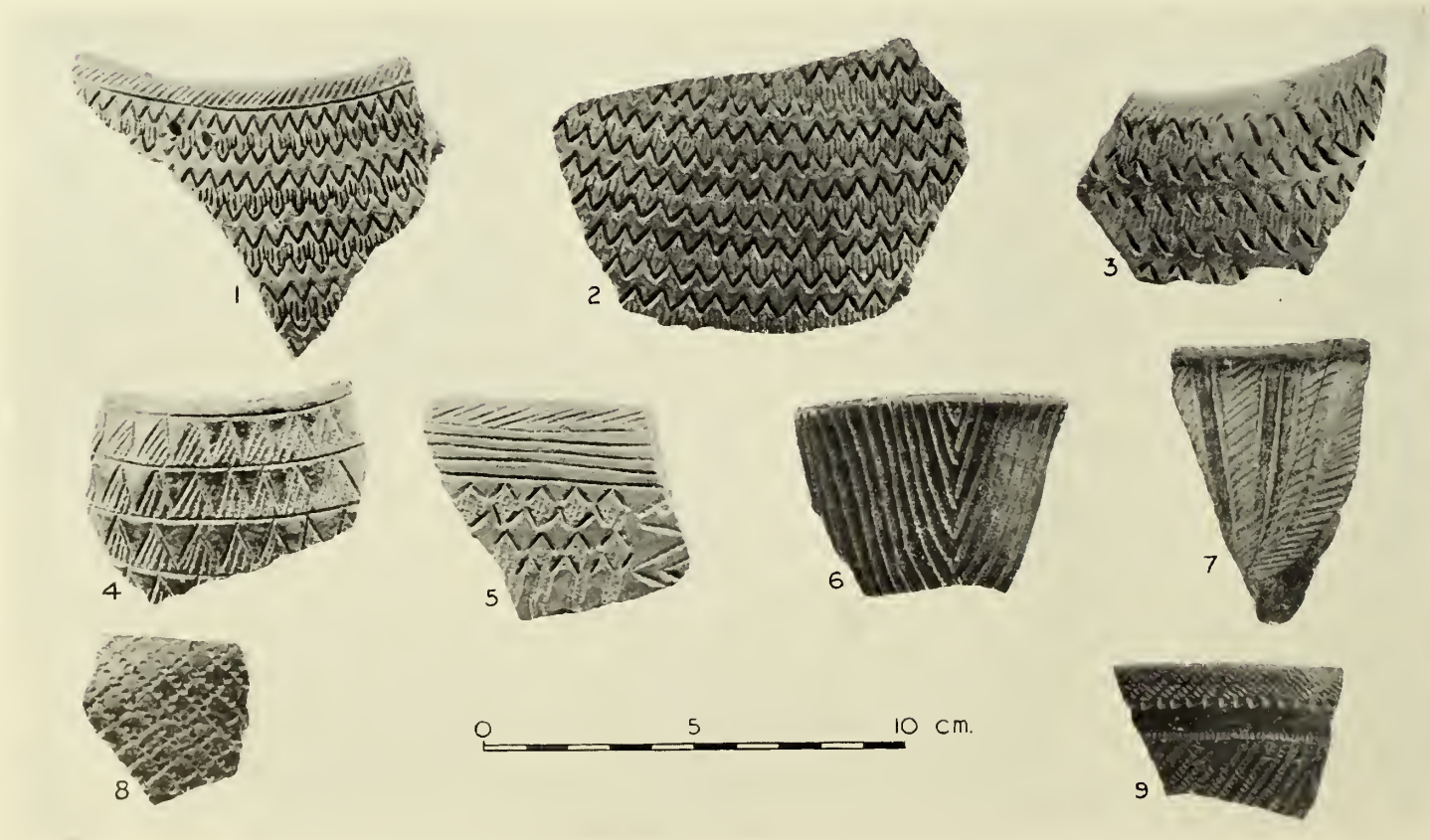
A. Miscellaneous fragments



B. Grooved sherds
DECORATED POTSHERDS
See p. 62



A. 'Jebel Moya' pottery



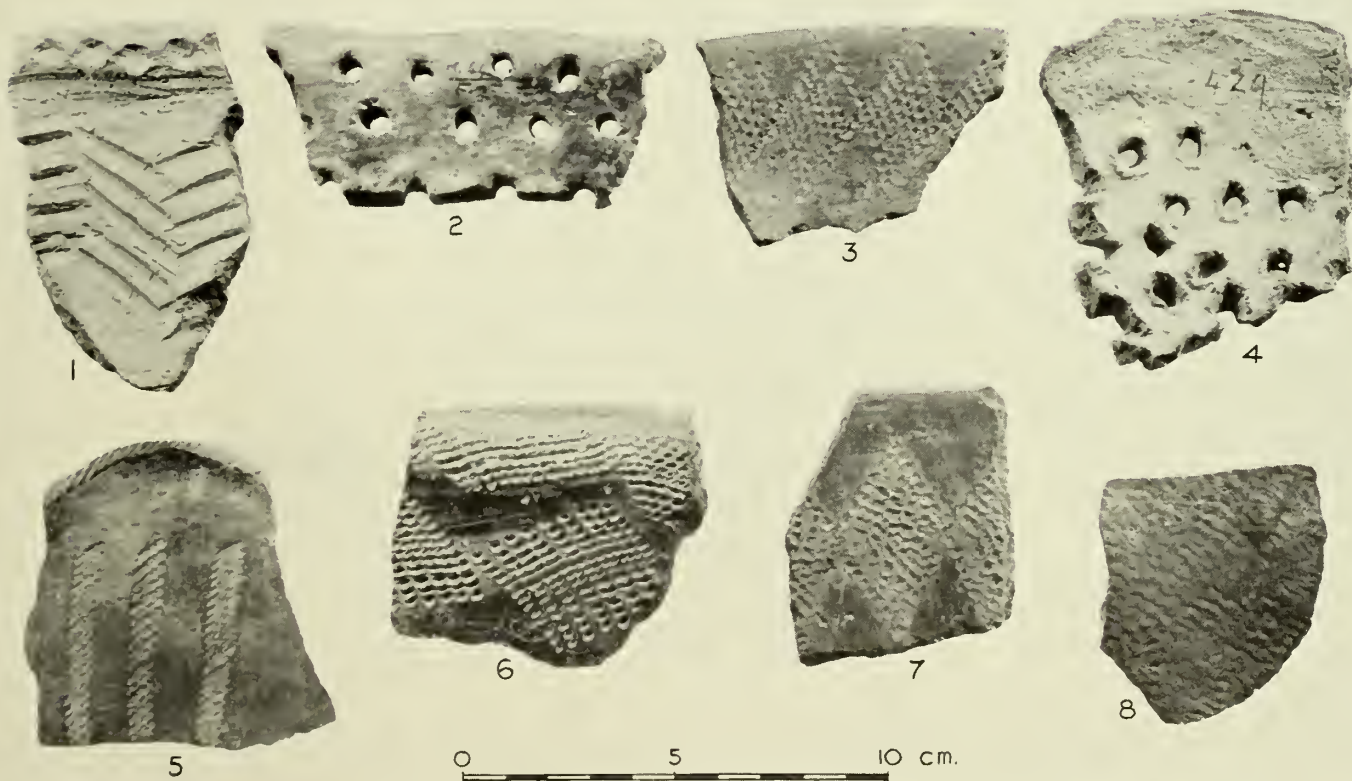
B. Pottery with incised decoration

DECORATED POTSHERDS

See p. 62



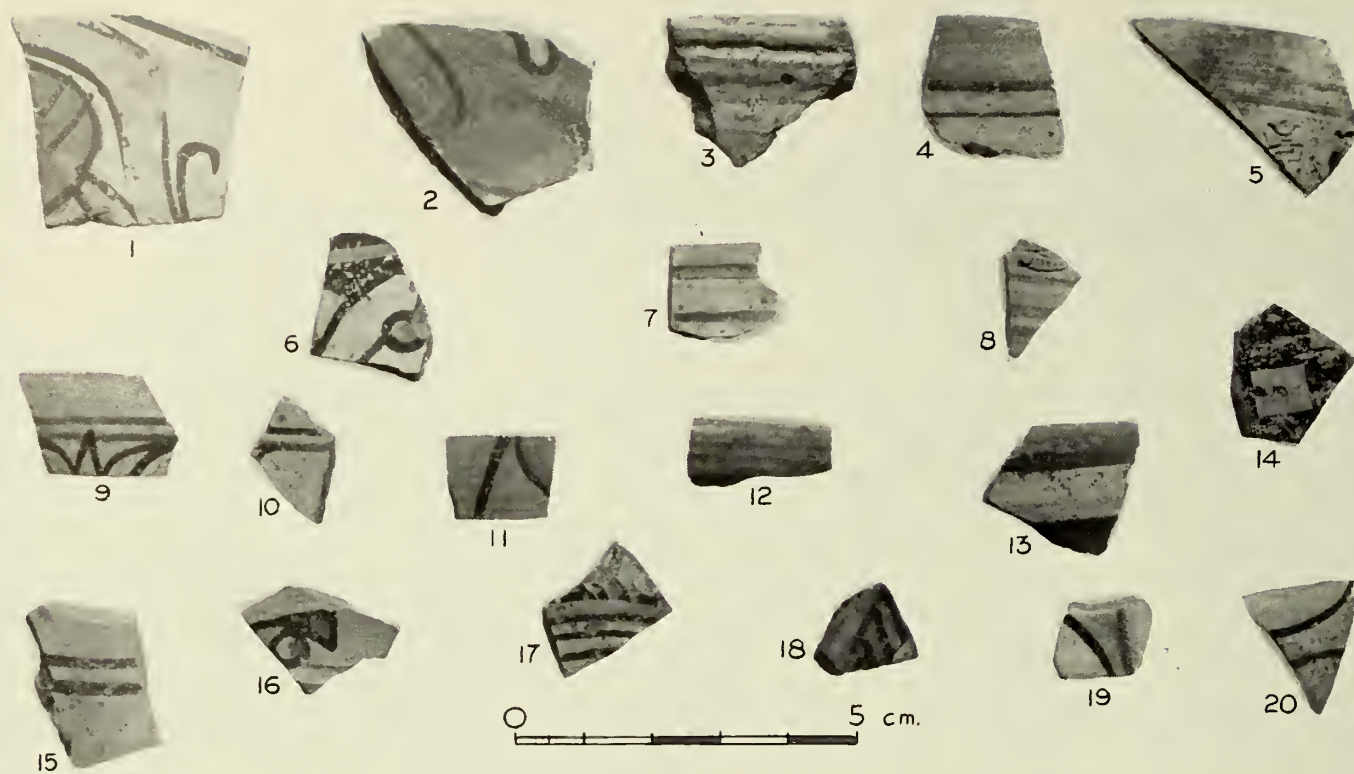
A. Fragments with raised decoration



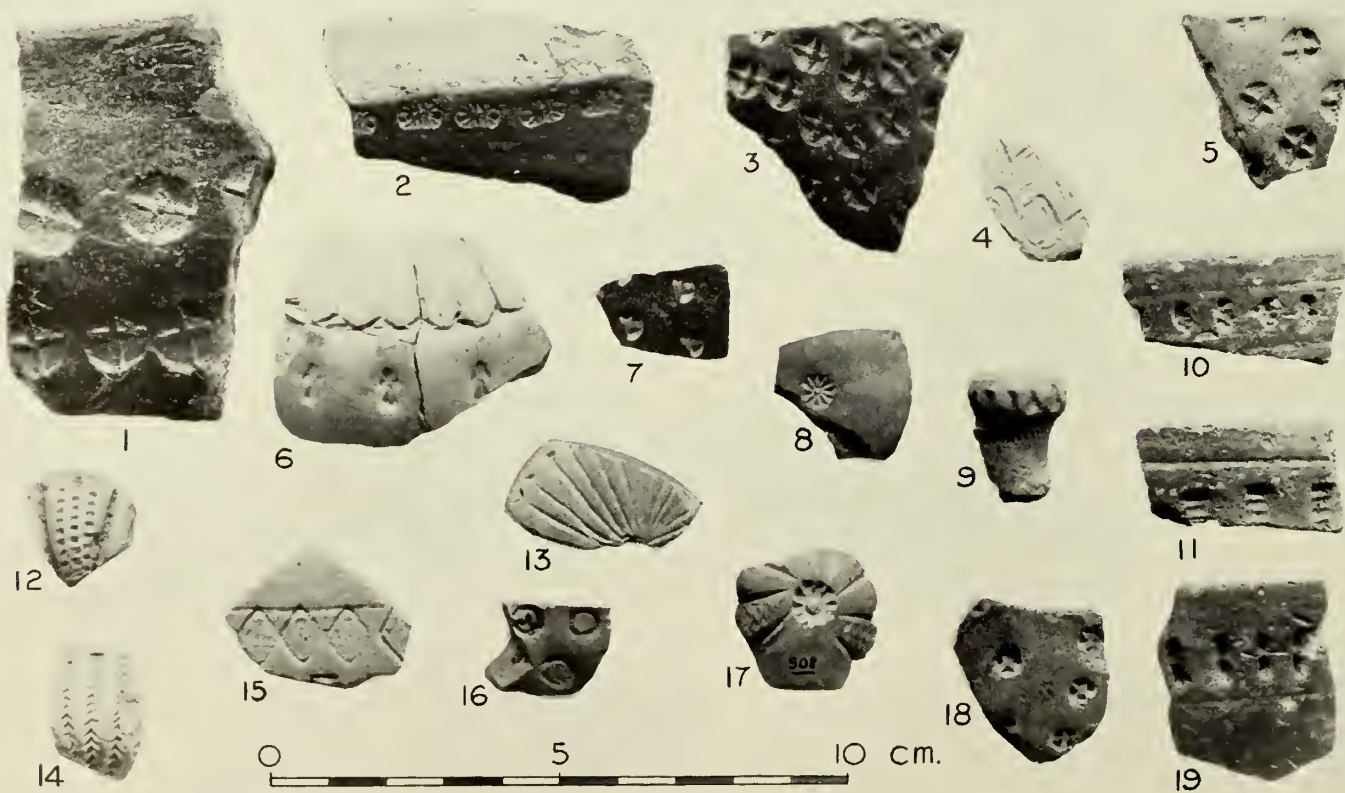
B. Miscellaneous fragments

DECORATED POTSDHERDS

See p. 63



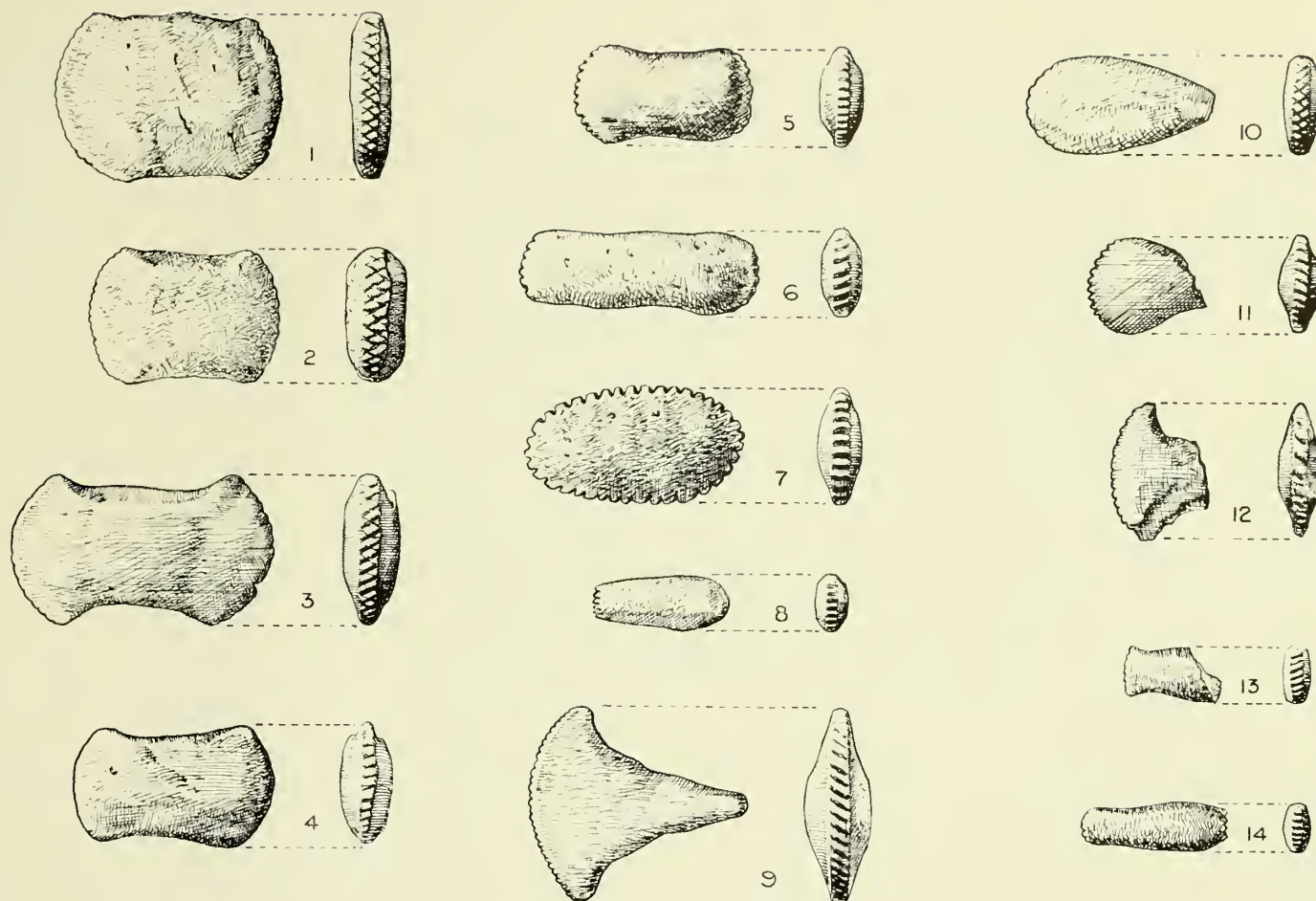
A. Painted pottery



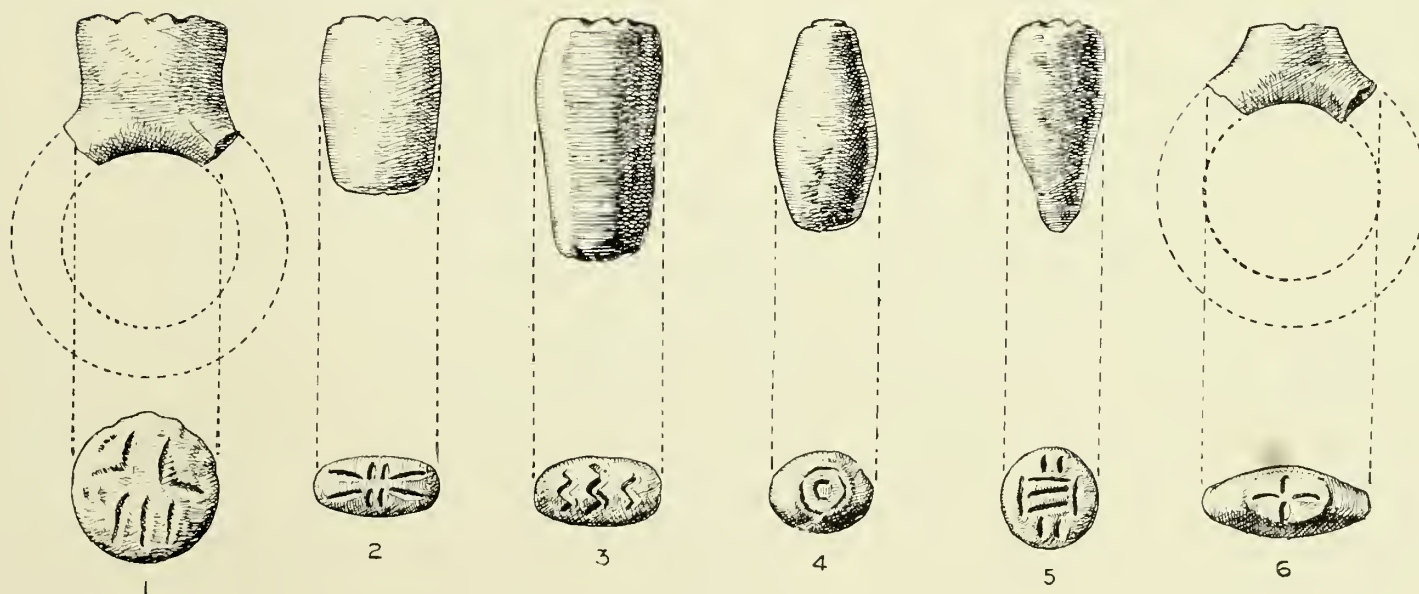
B. Stamped pottery

DECORATED POTSHERDS

See pp. 63, 64



A. Pottery 'rockers' for decorating pottery. 1:2



B. Pottery stamps. 1:1

See pp. 65, 66



Pot, O.C. 43
See pp. 47, 66



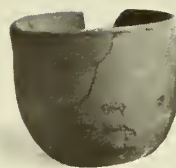
1



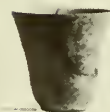
2



3



4



5



6



7



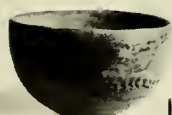
8



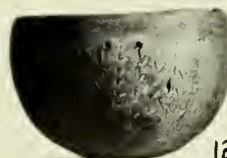
9



10



11



12



13



14



15



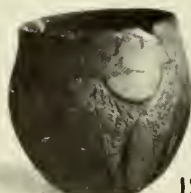
16



17



18



19



20

Pots. 1:4. 1-6, wheel-made; 9-20, hand-made
See p. 66



1



2



3



4



6



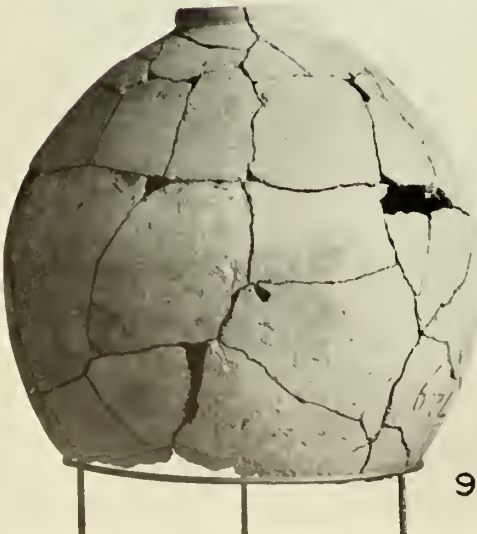
5



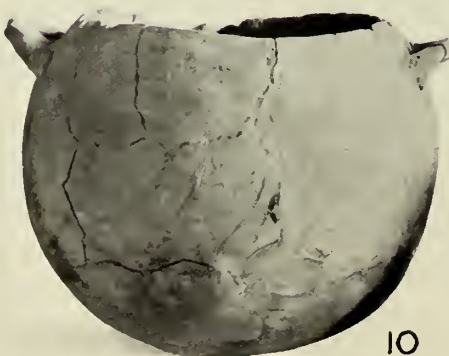
7



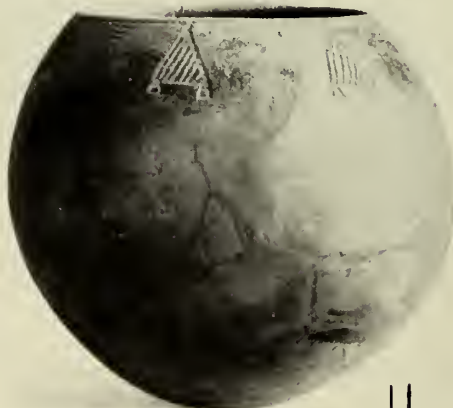
8



9



10

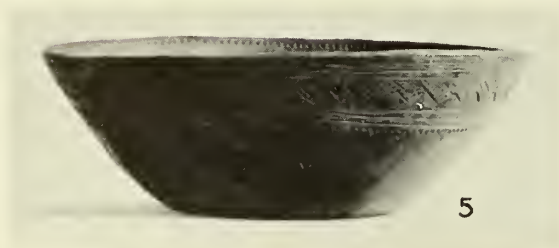


11

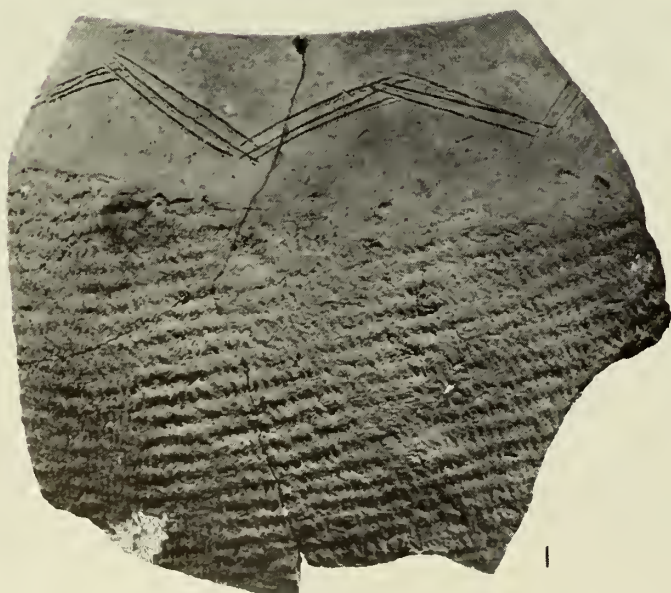
Pots. 1:5
See p. 67



Large pots. 1:6
See p. 67

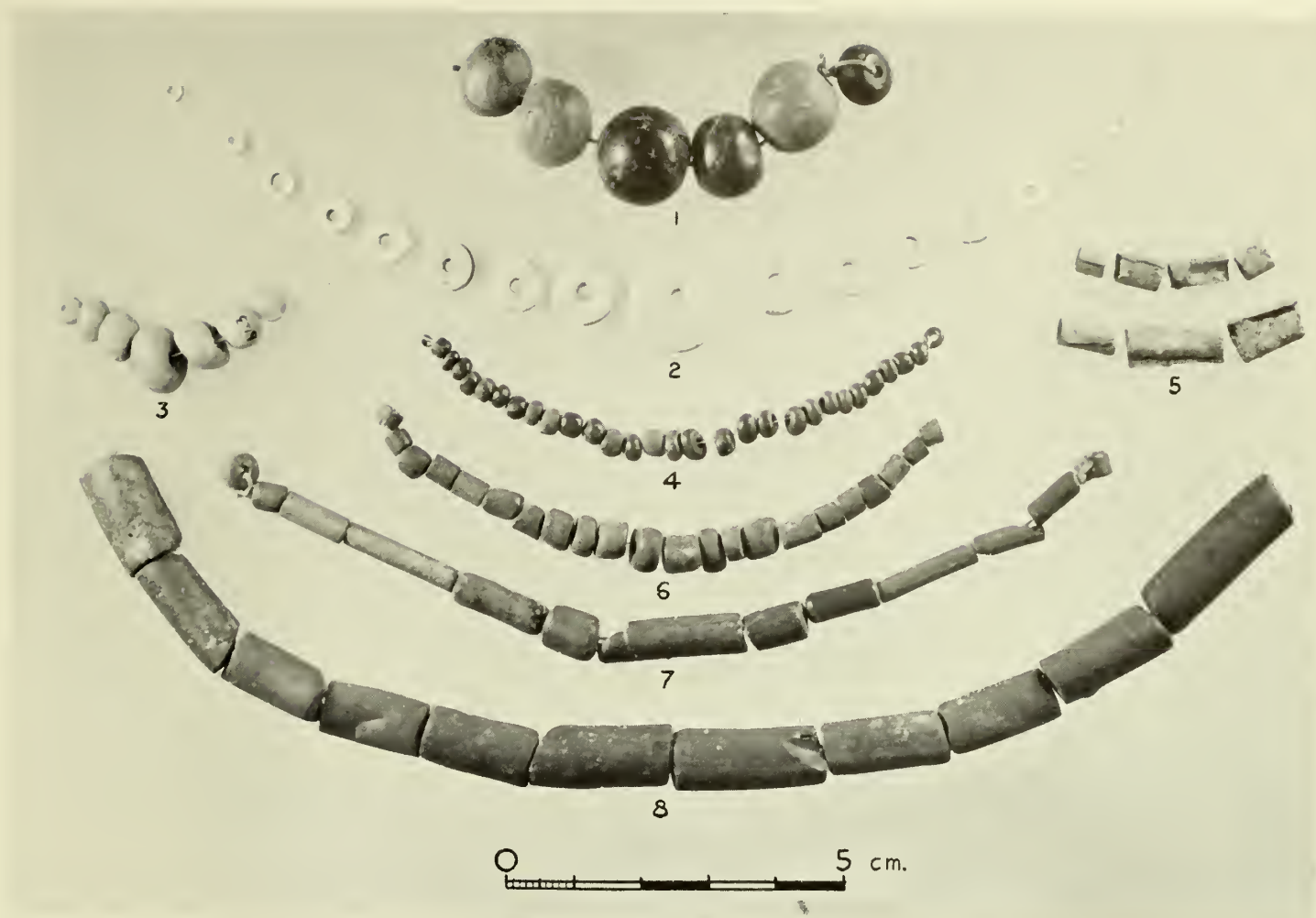


A. Flat bowls from Fung graves. 1:5

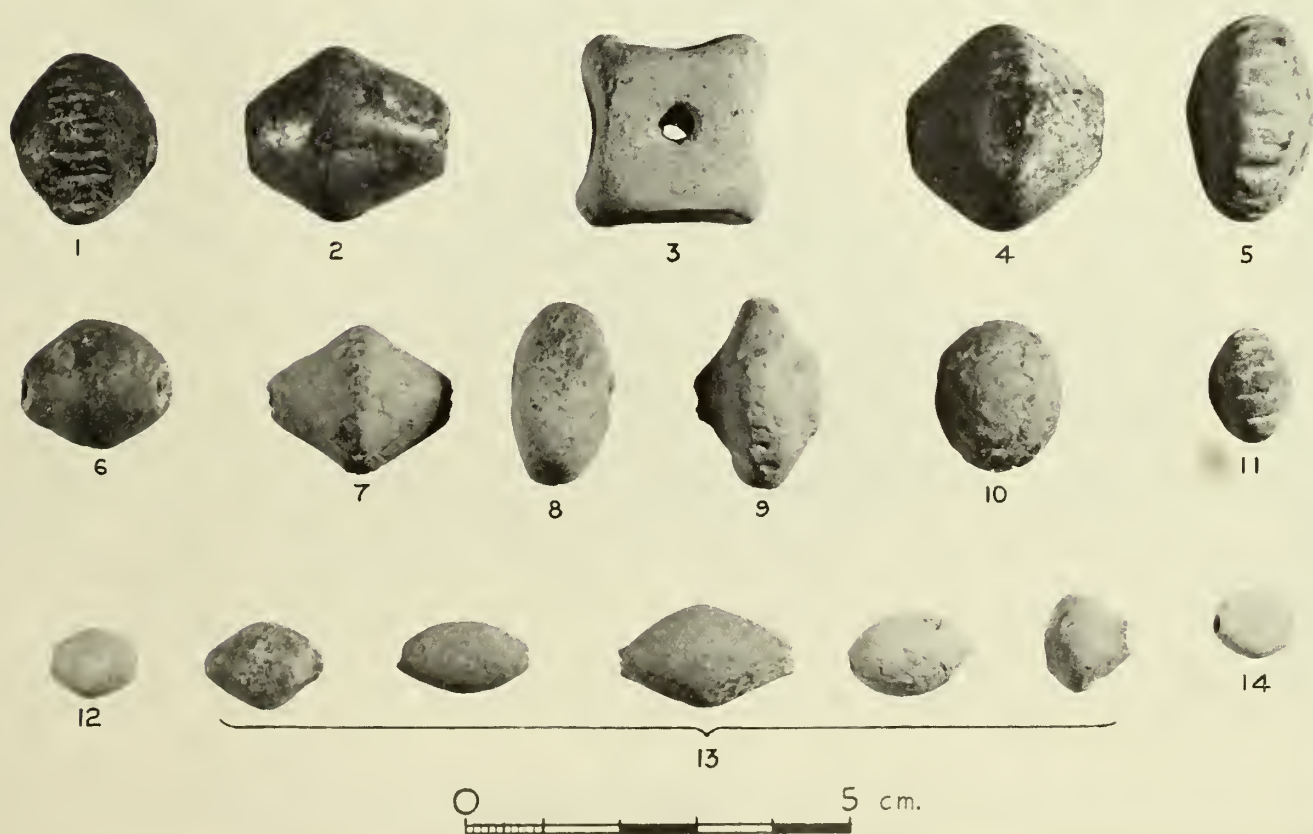


0 5 10 cm.

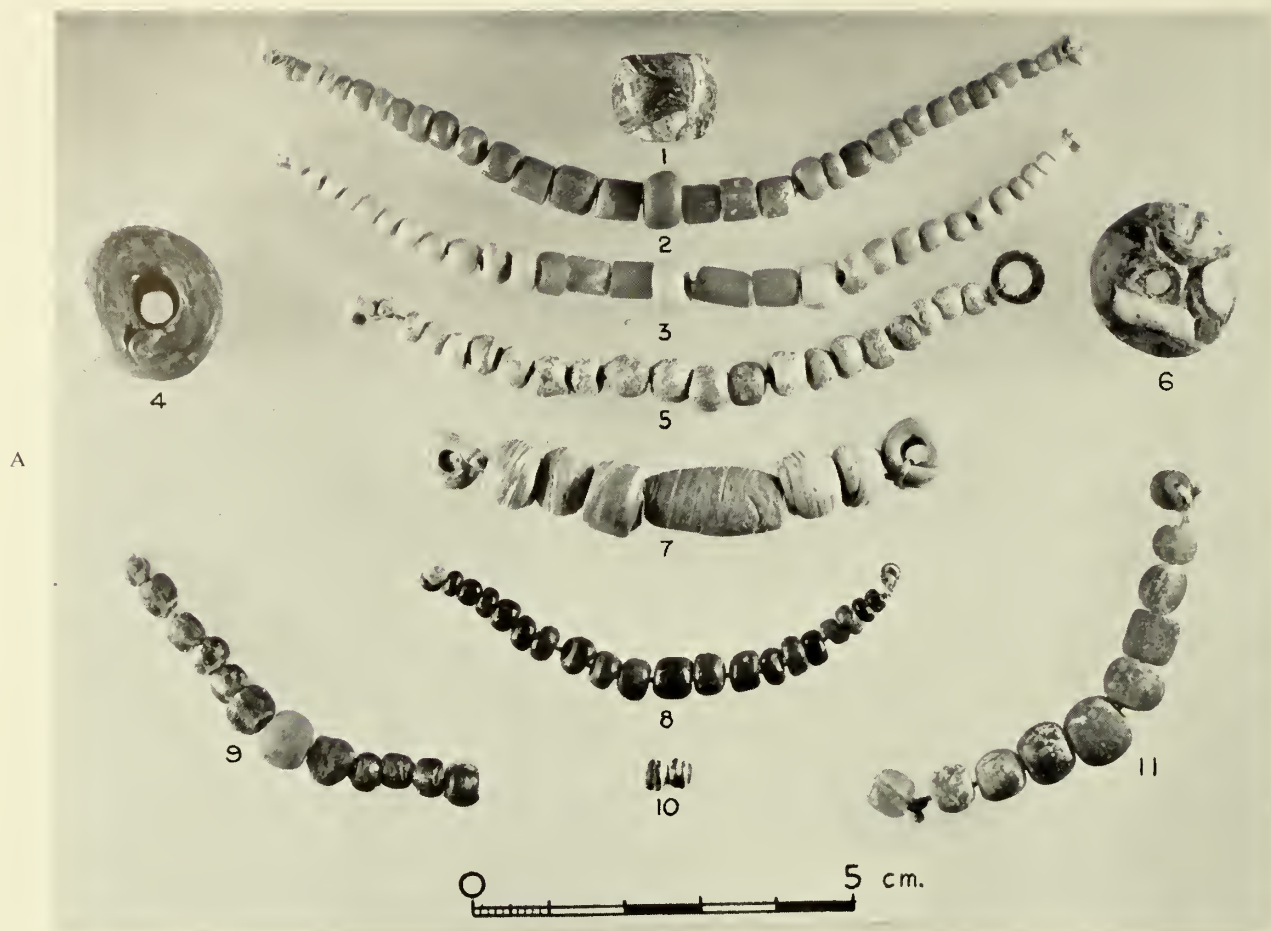
B. Fragments of *burmas*
See p. 67



A. Carnelian, ostrich egg-shell, red paste, &c.



B. Clay
BEADS
See p. 76

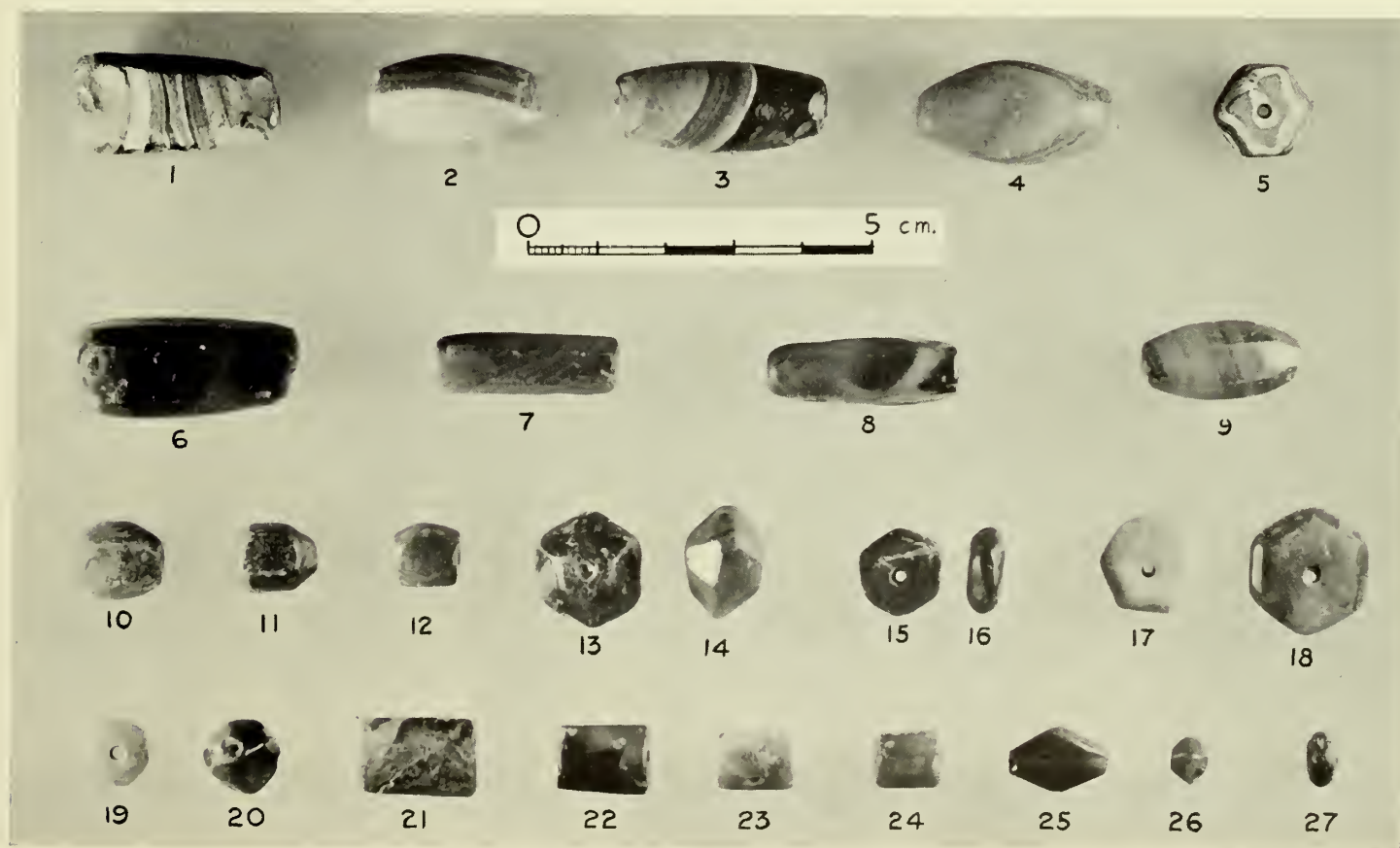


Glass beads. 1:1

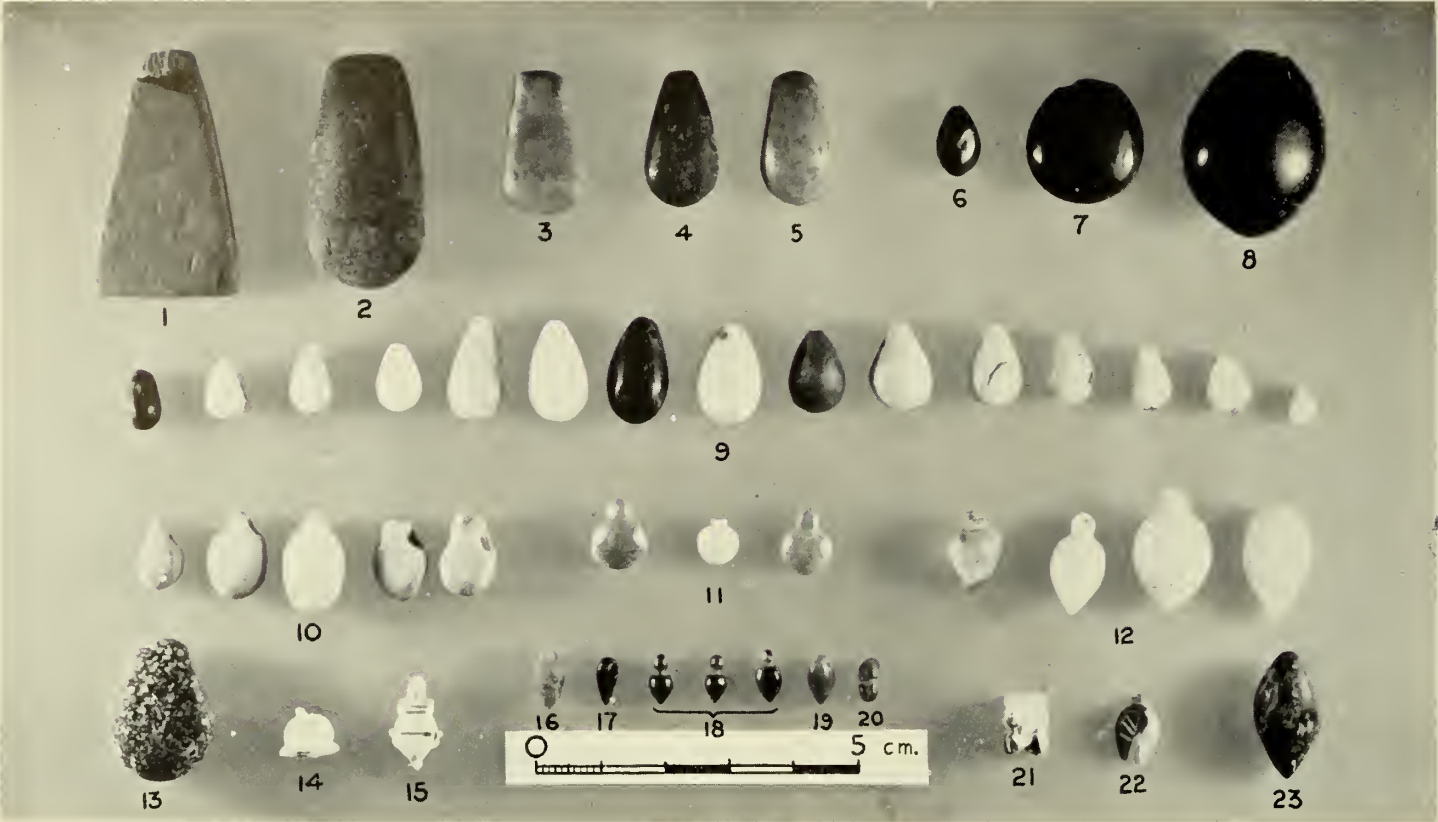
See pp. 76, 77



A. Faience beads, actual size



B. Agate and carnelian beads. 19:20
See pp. 77, 78



A. Pendants of carnelian, quartz, &c.



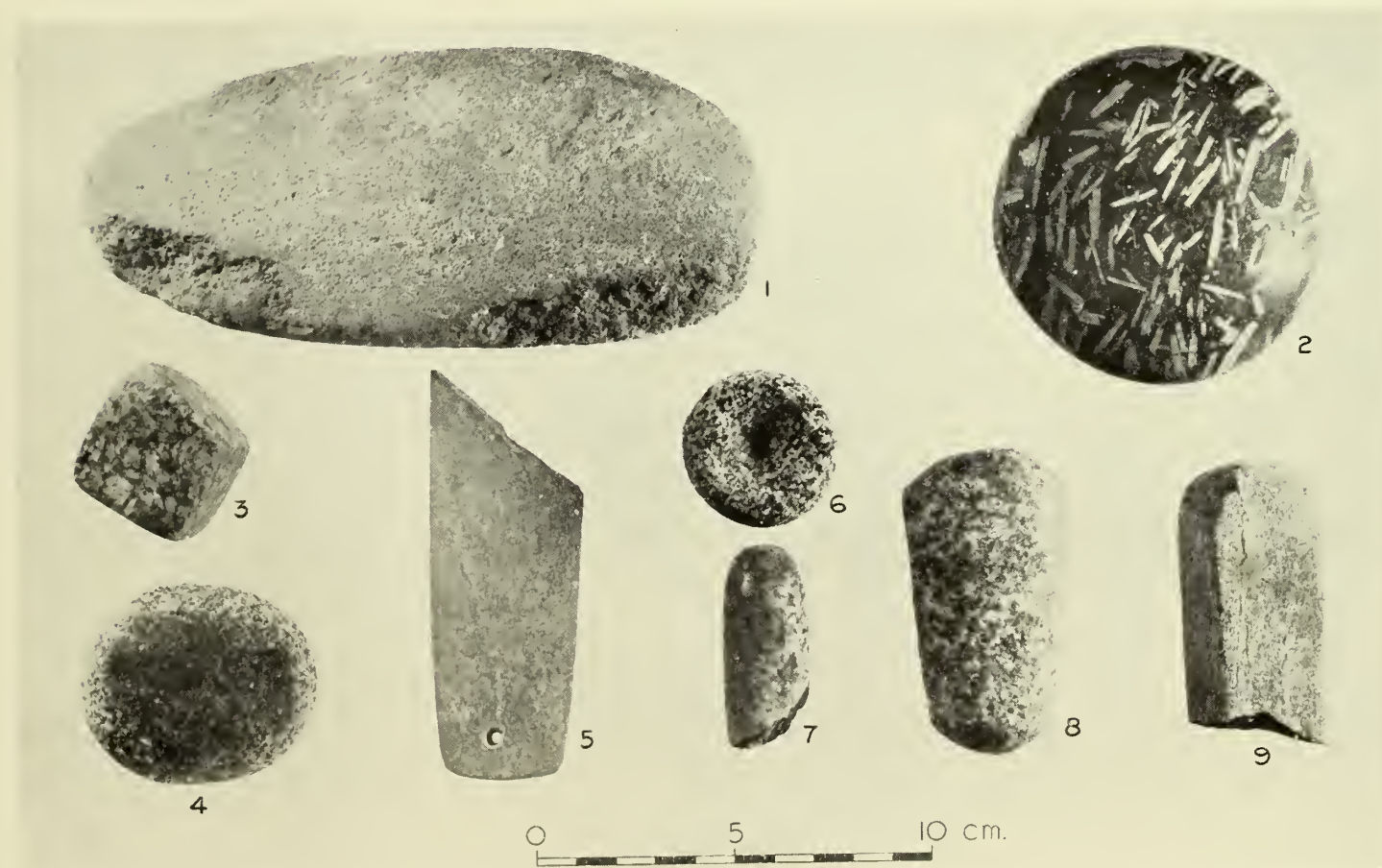
B. Amulets

PENDANTS AND AMULETS

See pp. 78, 79



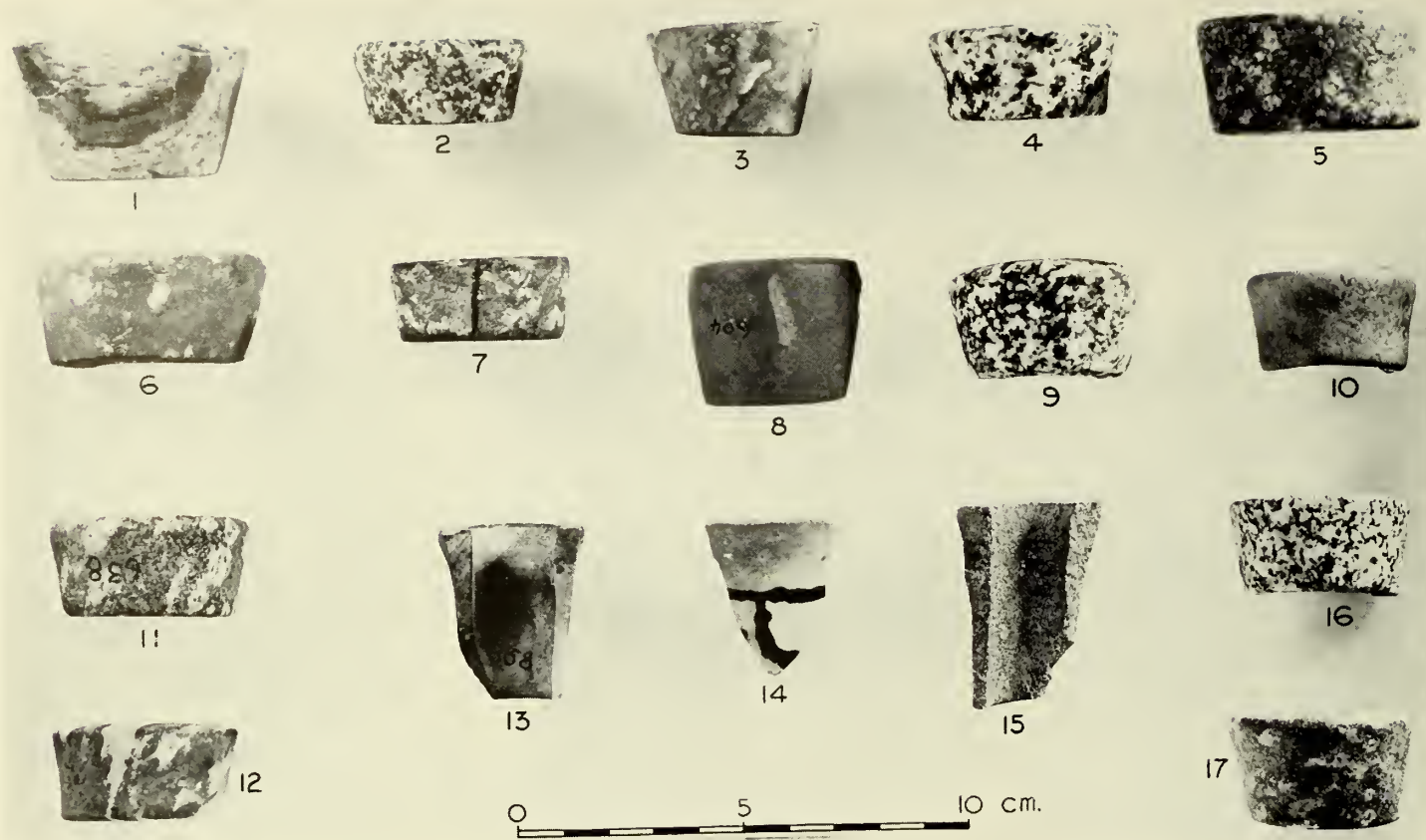
A. Celts, rings, &c.



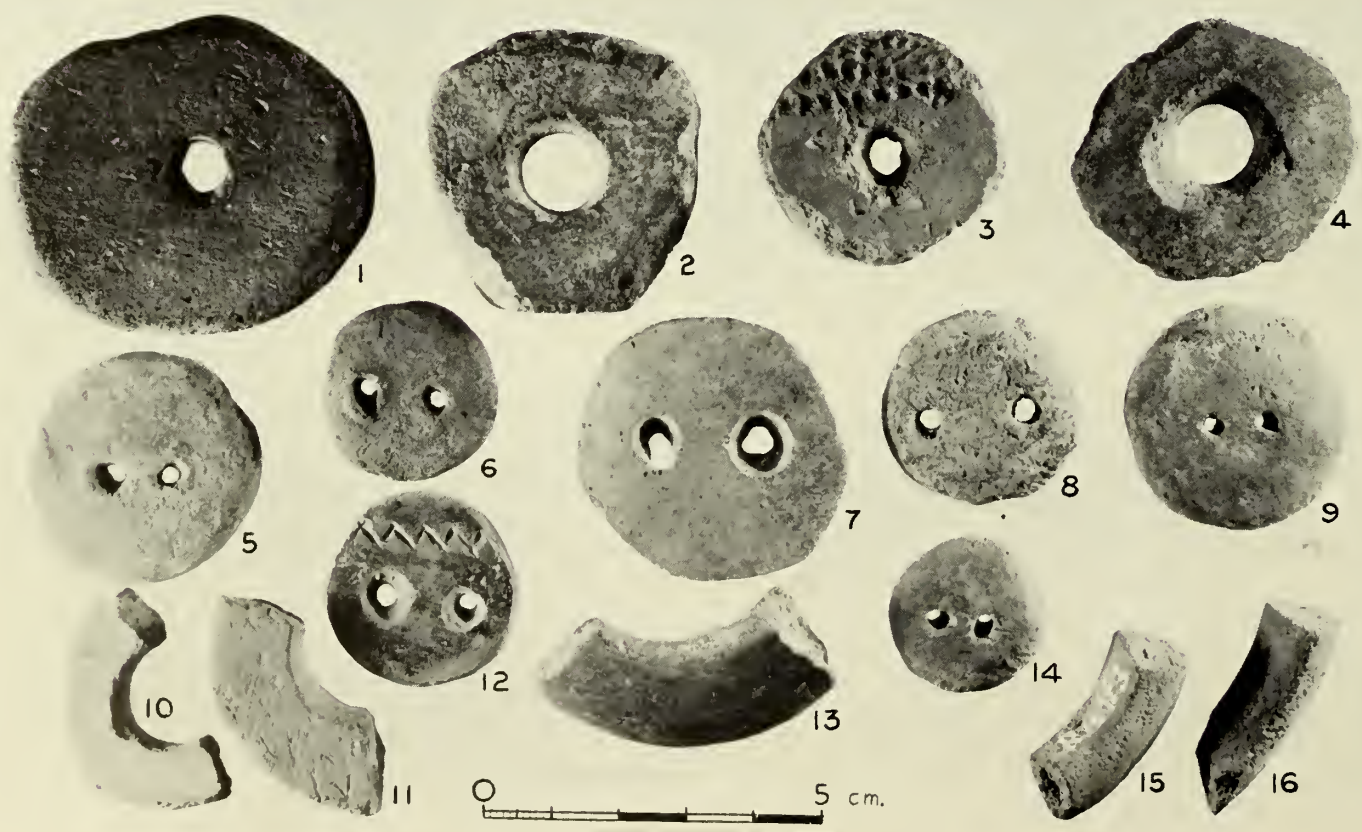
B. Pounders and rubbers

STONE OBJECTS

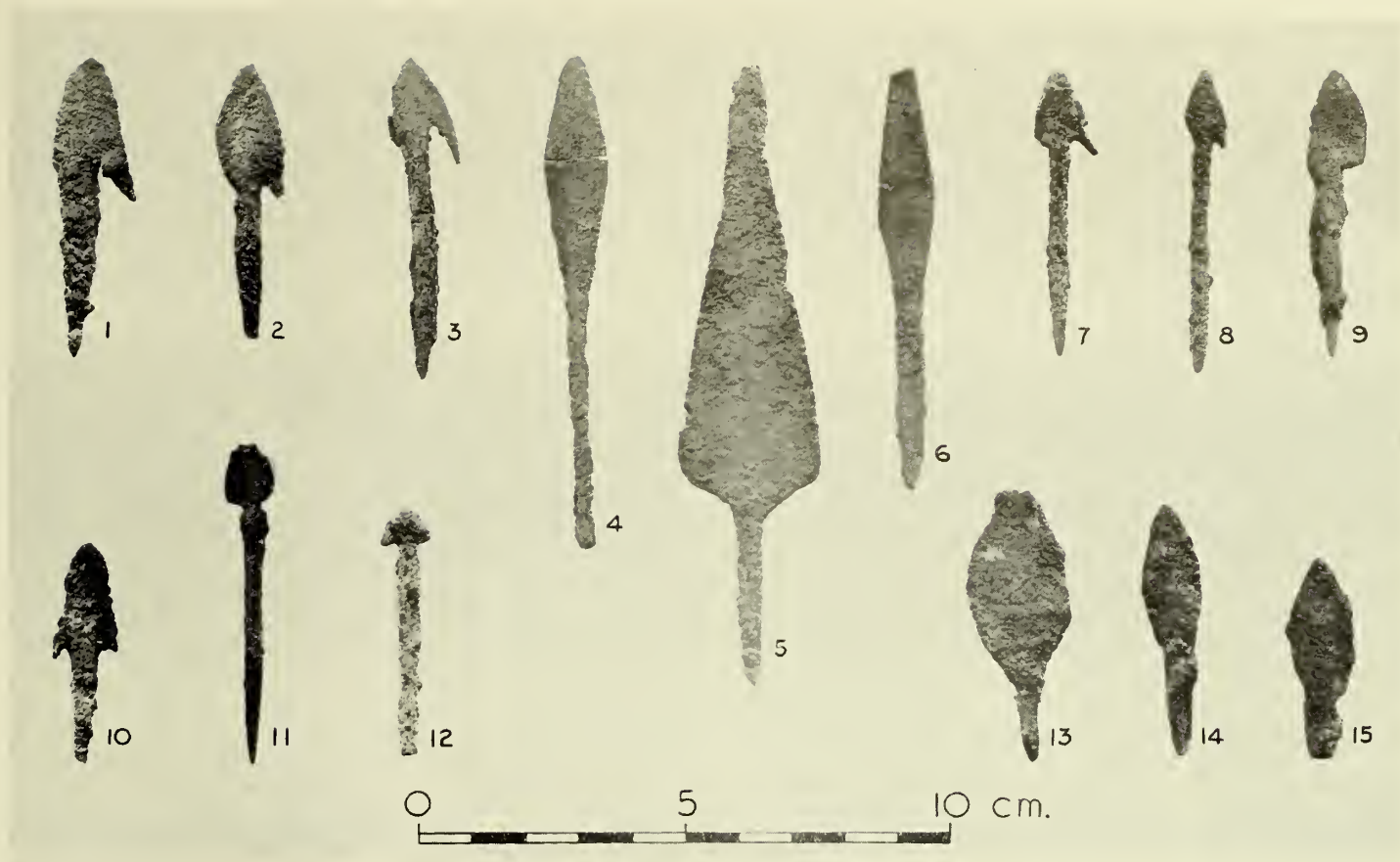
See pp. 98, 99



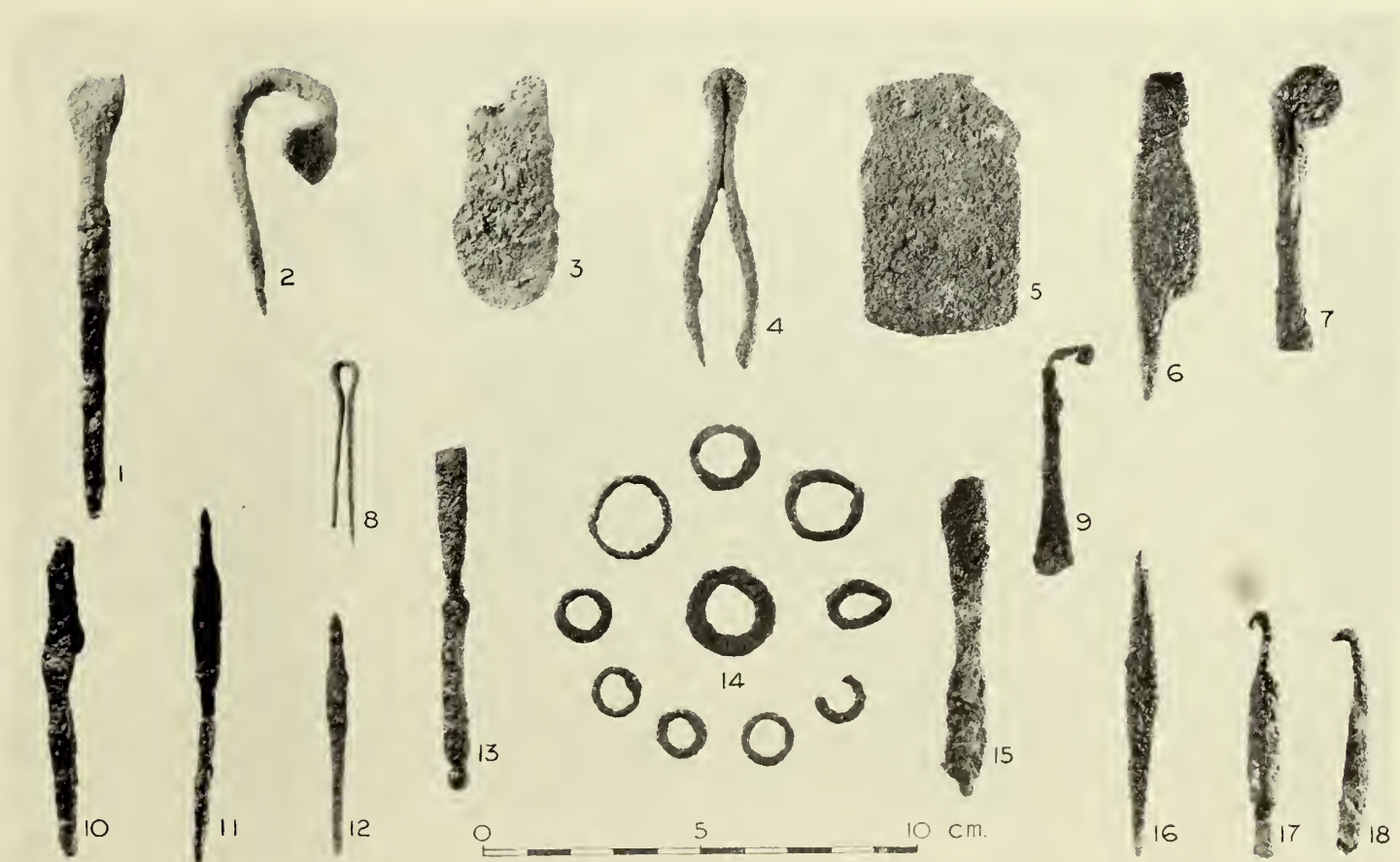
A. Archers' looses



B. Pottery disks and ring fragments
See p. 99



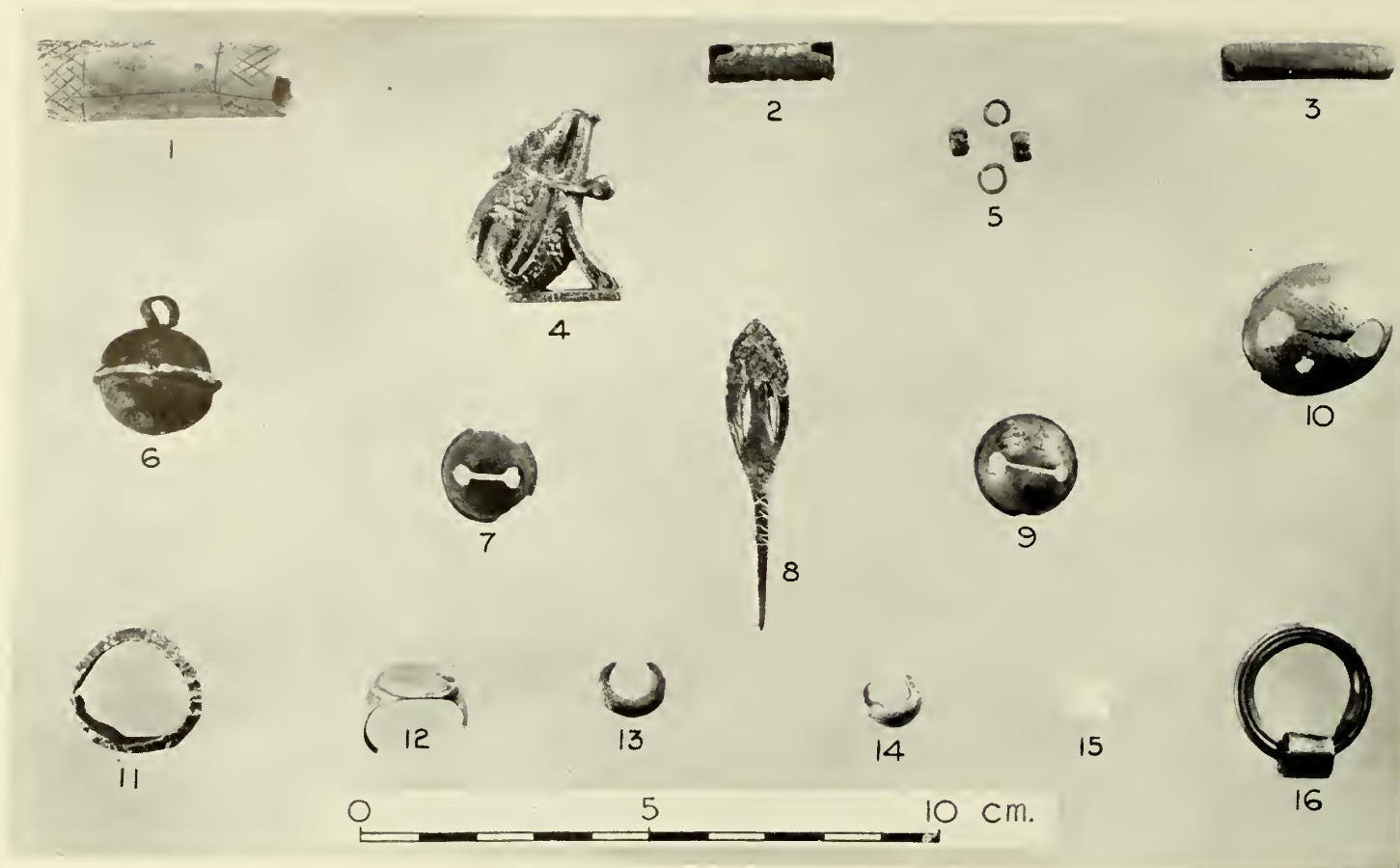
A. Arrow-heads



B. Miscellaneous implements

IRON OBJECTS

See p. 100



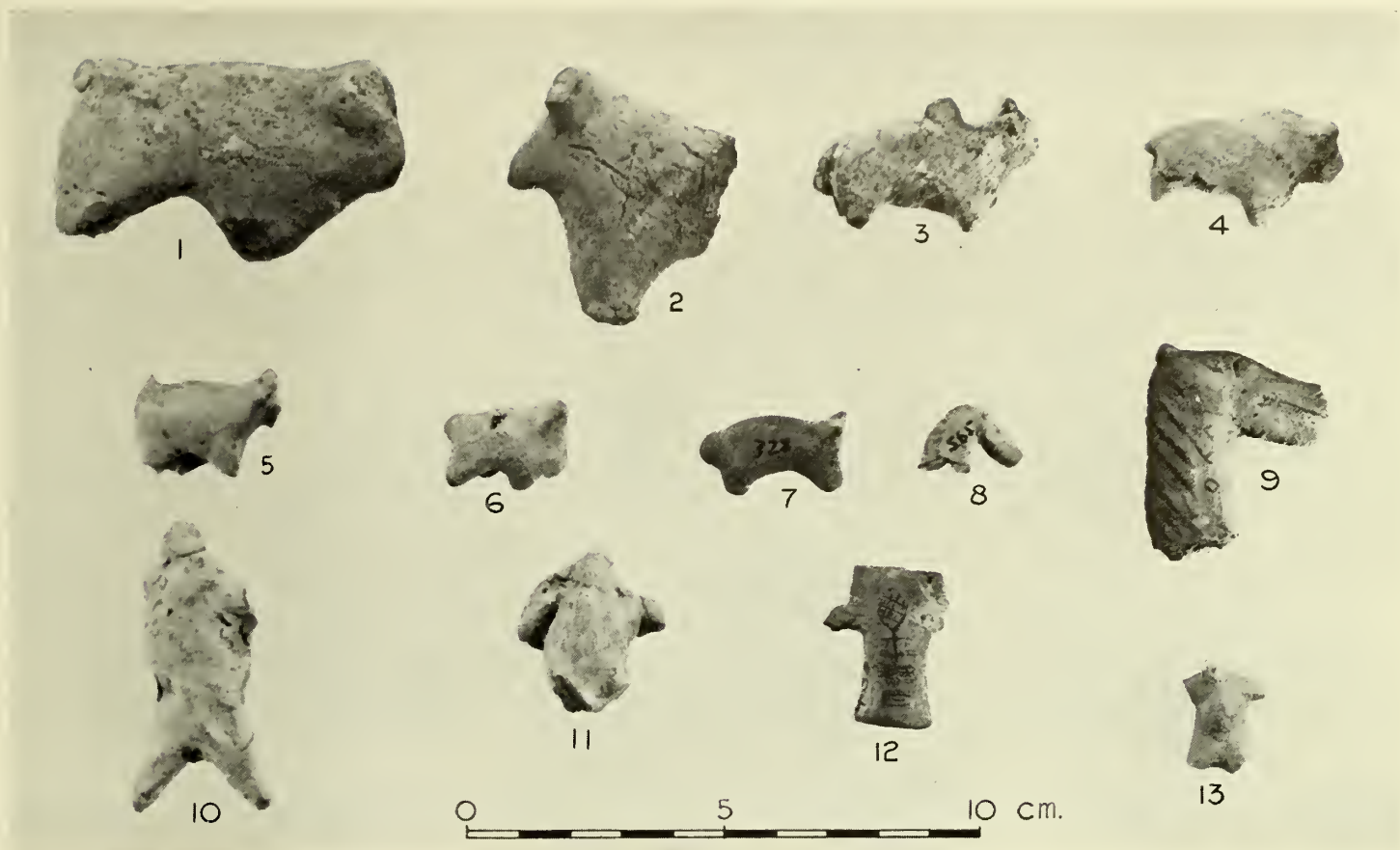
A. Miscellaneous metal objects



B. Nose- and ear-studs; shell ornaments

SMALL OBJECTS

See pp. 100, 101



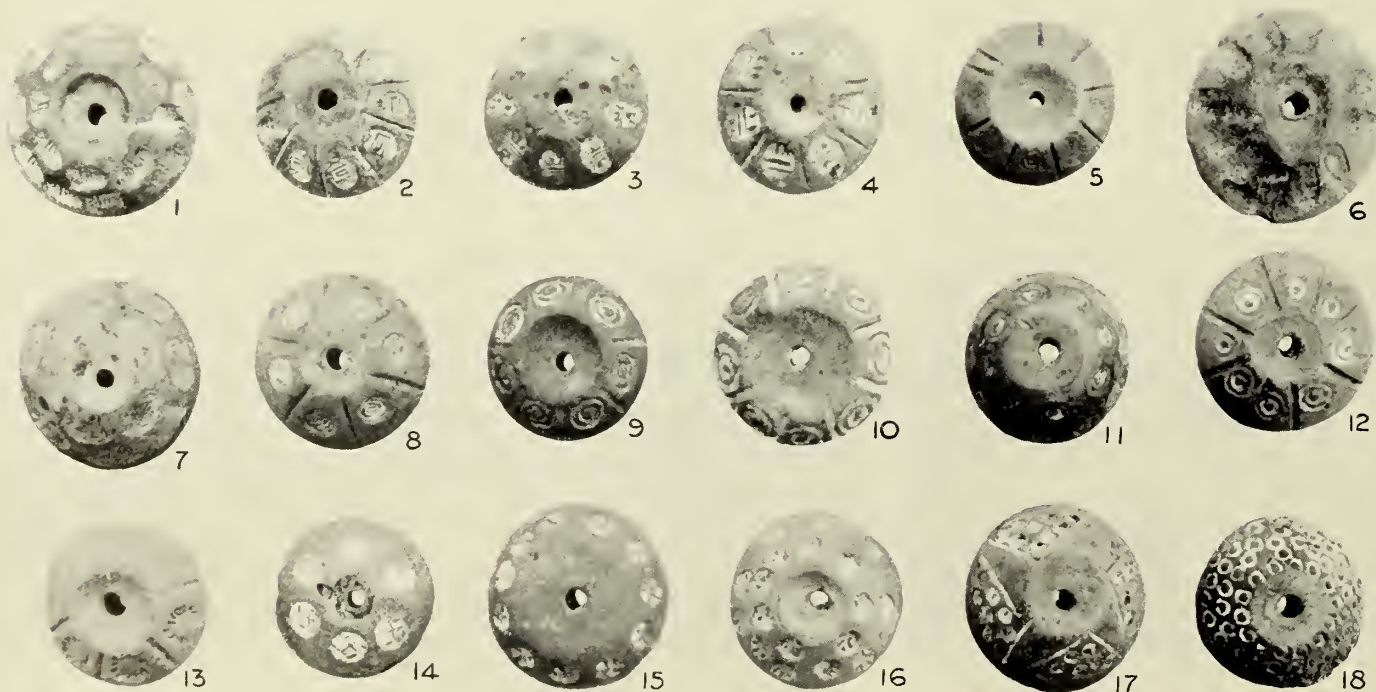
A. Clay figurines



B. Woman spinning cotton in Abu Geili village
See p. 102



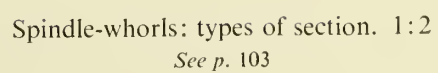
A. With incised decoration



B. With stamped impressions

POTTERY SPINDLE-WHORLS

See p. 102





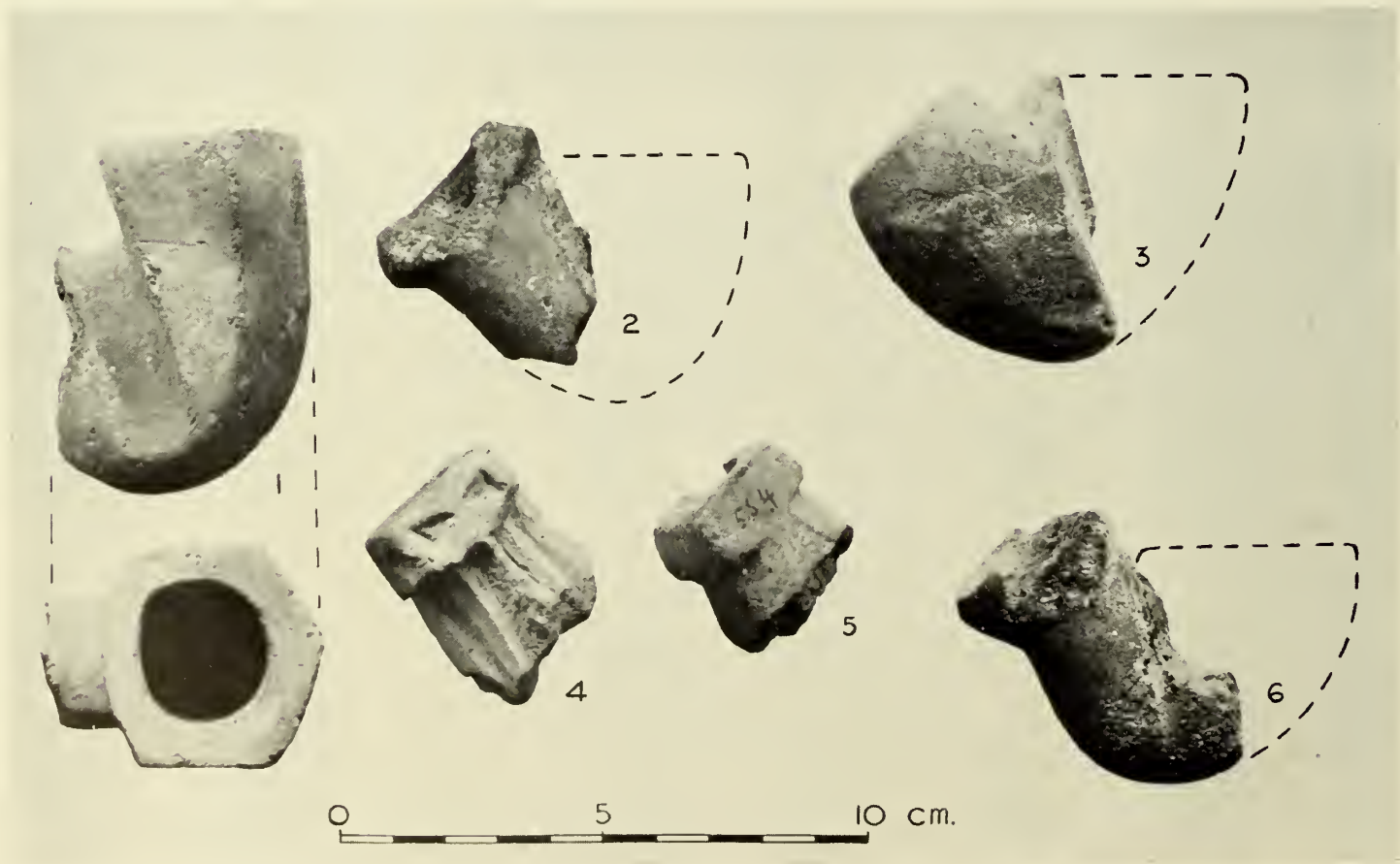
Spindle-whorls: types of incised design. 1:2

See p. 104





A. Pipe-bowls



B. Stem-holders (except No. 1)

CLAY TOBACCO PIPES

See p. 105

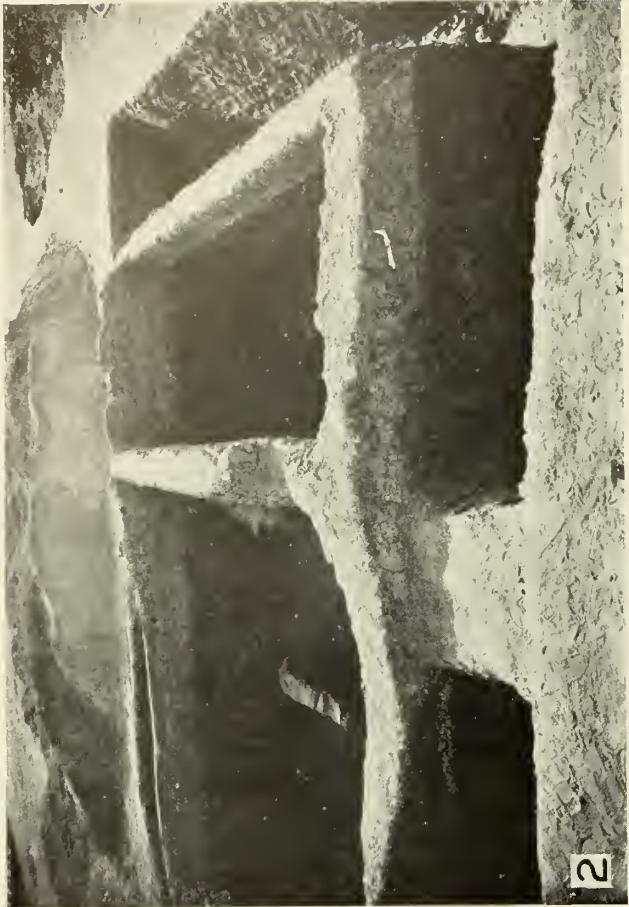


SITE 401. THE PIT GRAVE WITHIN A RED BRICK ENCLOSURE

1. View of top of pit, looking south
2. Bricks on surface
3. View looking north down into pit
4. View of wall and burial from above

See p. 107

ABU GEILI

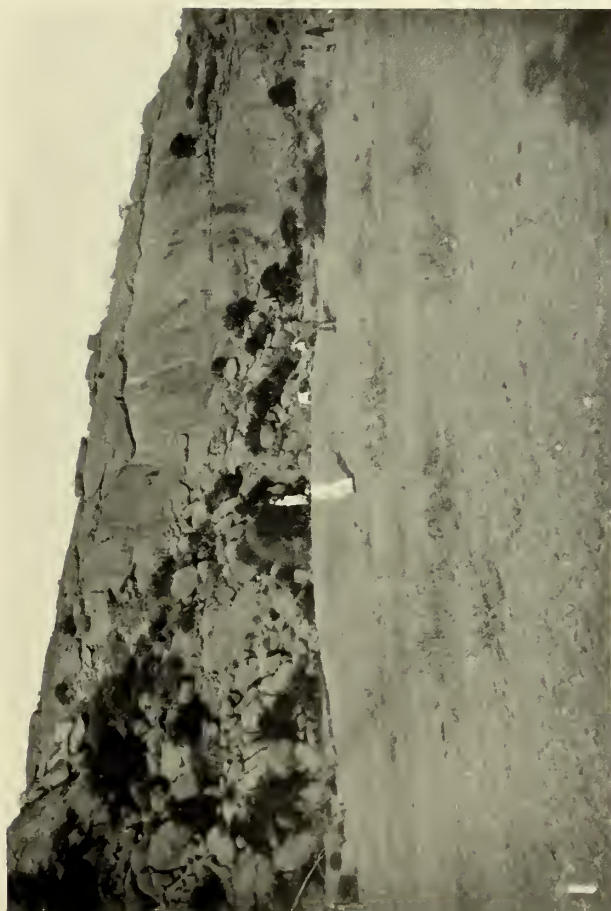


SITE 401

1, 2, & 3. The mud building

4. Grave 401/3

See p. 109



THE MOUND BEFORE EXCAVATION

1. View looking west
3. View looking north

2. View looking south-east
4. View looking south

SAQADI



CLEARING THE STONE WALL OF ENCLOSURE

- 1. Early stage of excavation, view looking north-west
- 2. Stone wall partly cleared, view looking west-south-west
- 3. Beginning of excavation inside enclosure, looking east
- 4. West wall, external face as finally cleared

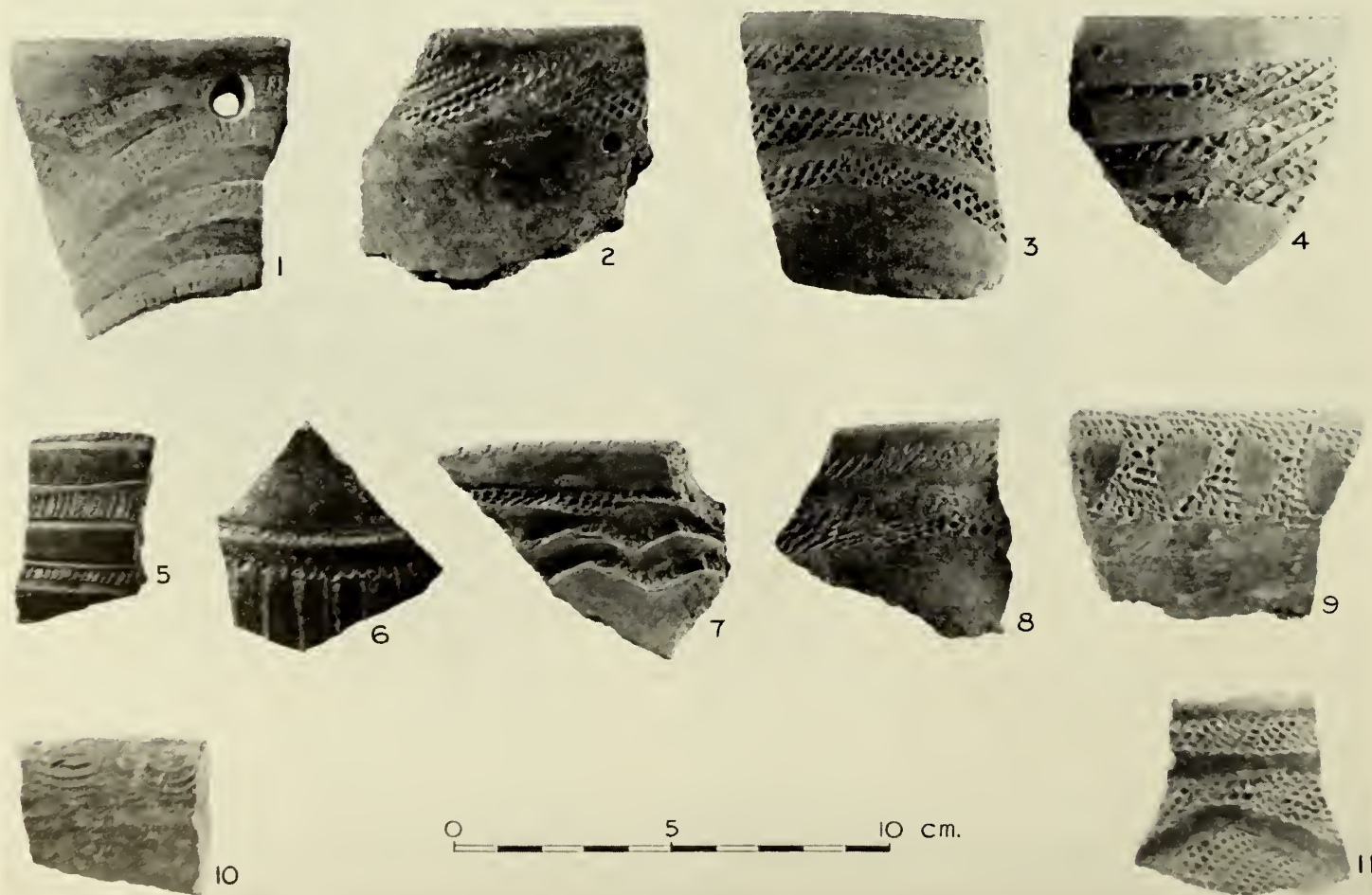


Pottery, rim sections. 1:6

See p. 126



A. Fragments from A-stratum



B. Fragments from B-stratum

DECORATED POTSHERDS

See p. 127



A. Miscellaneous potsherds

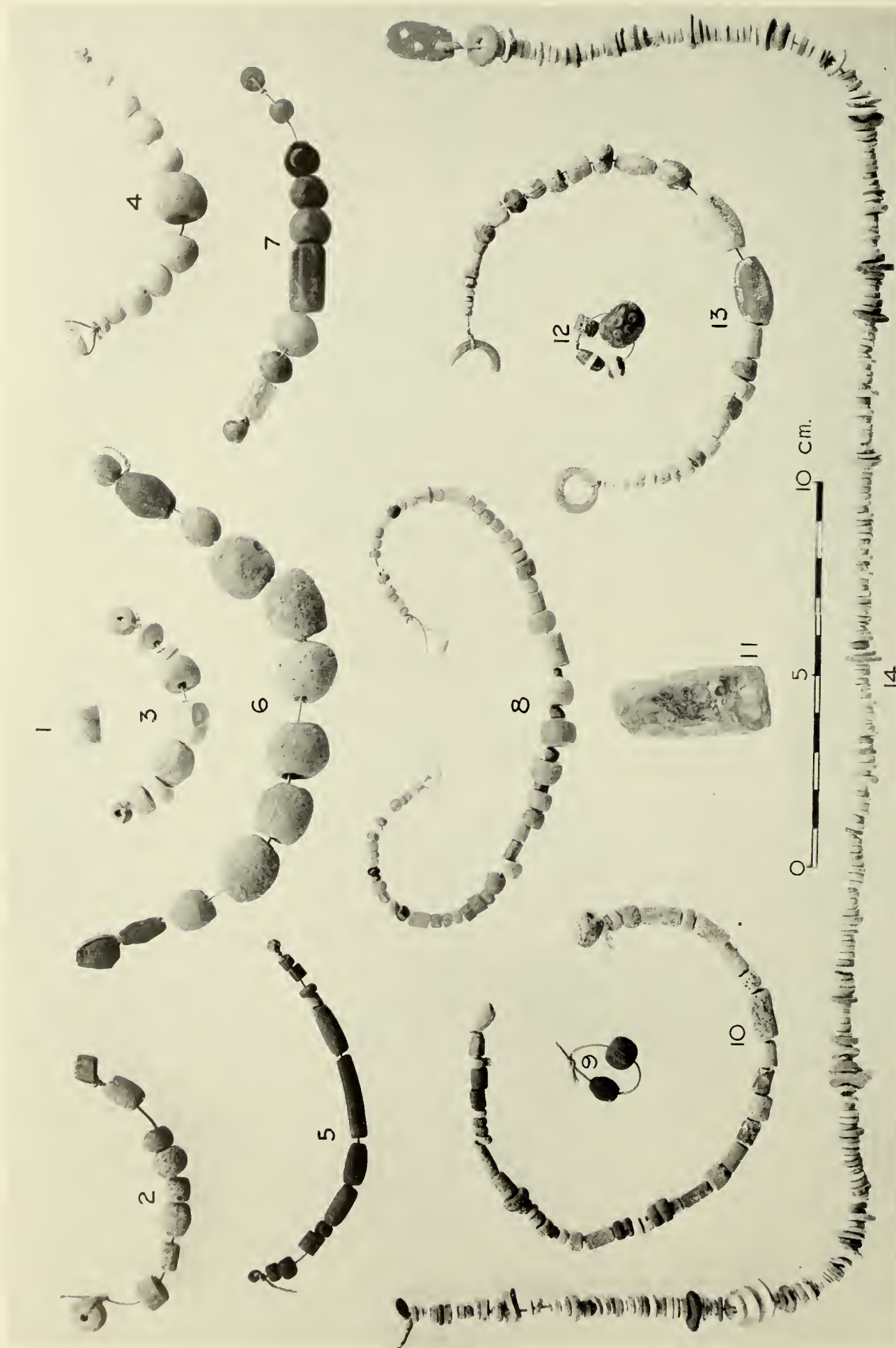


B. Miscellaneous pottery objects

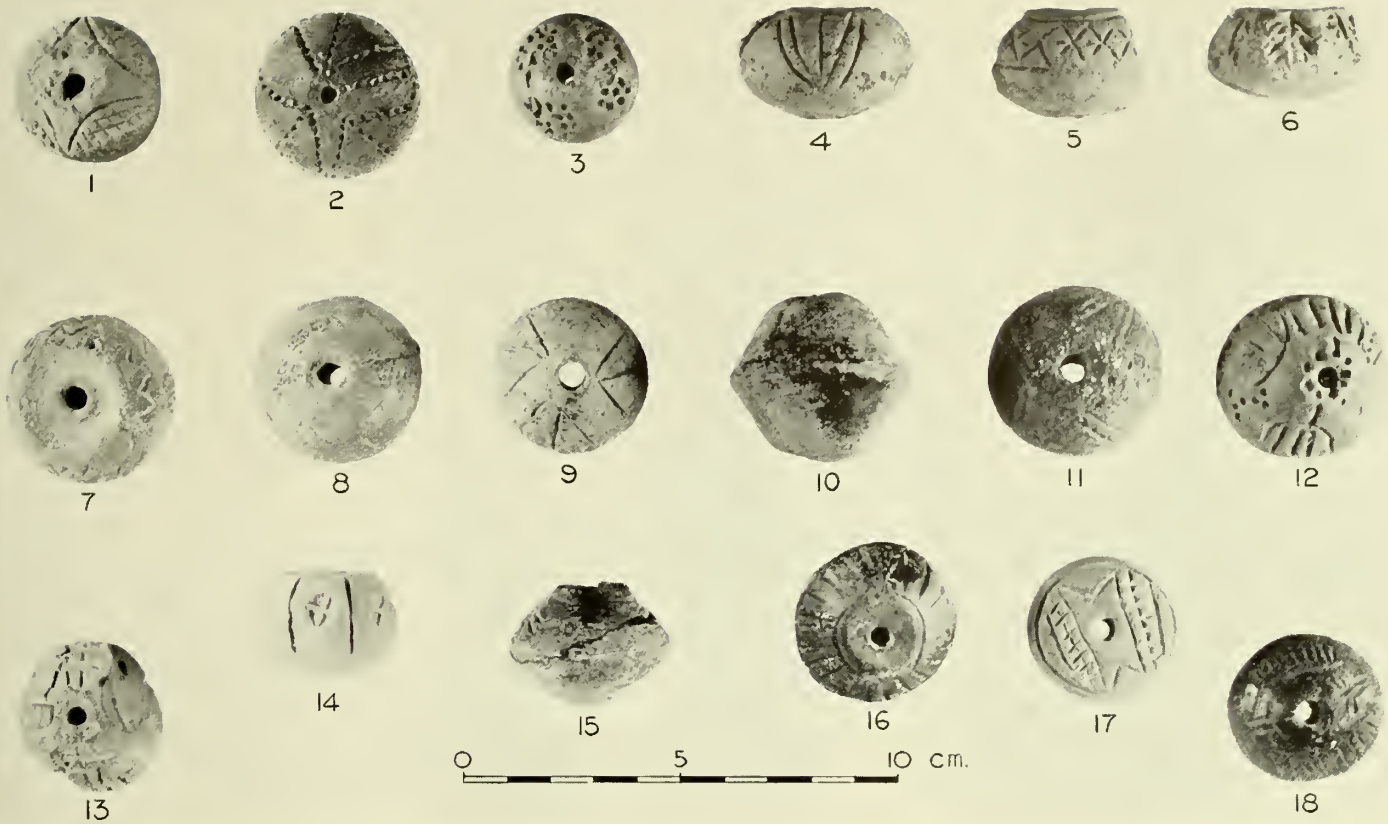
MISCELLANEOUS POTTERY FRAGMENTS

See pp. 127, 128

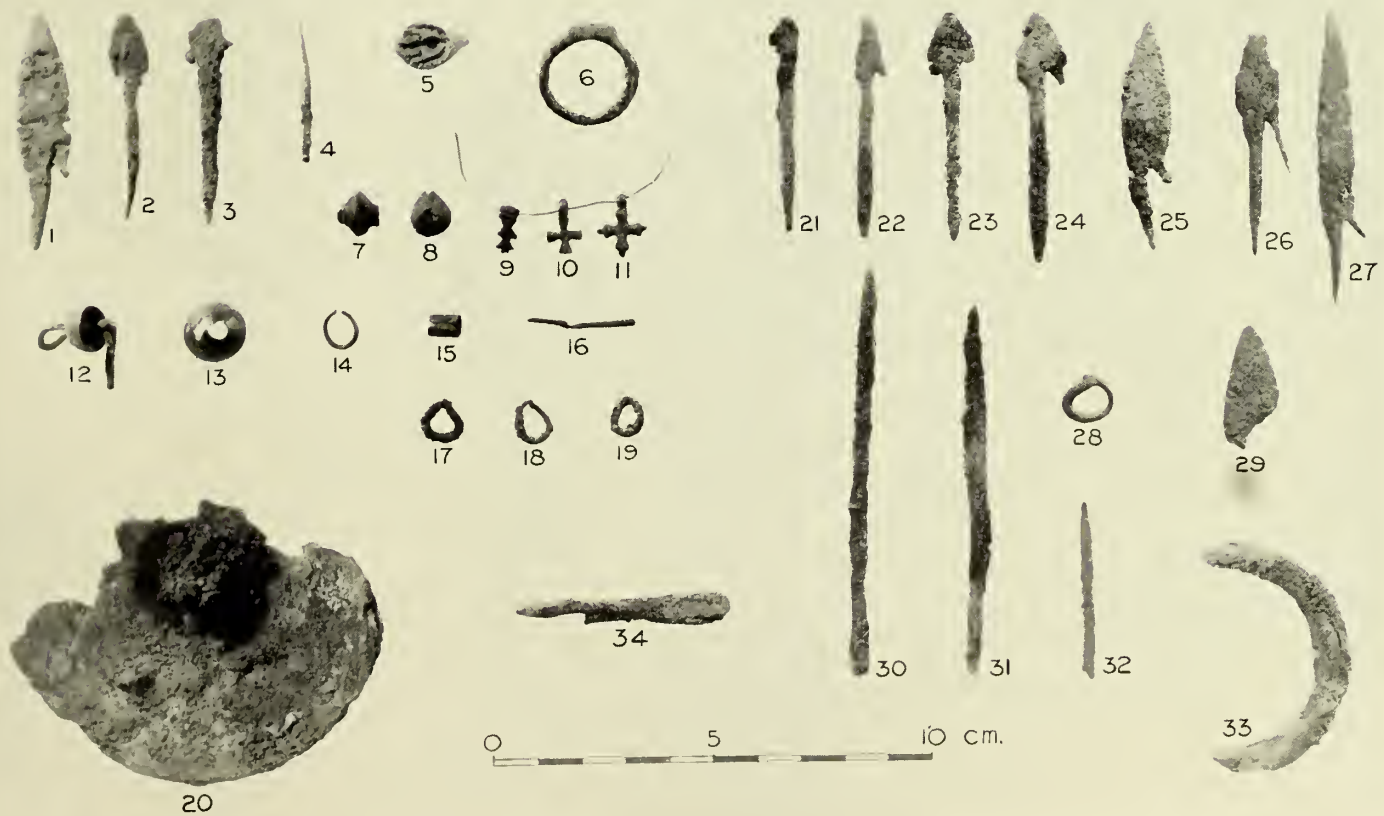
SAQADI



Miscellaneous beads from stratum A
See p. 128



A. Pottery spindle-whorls

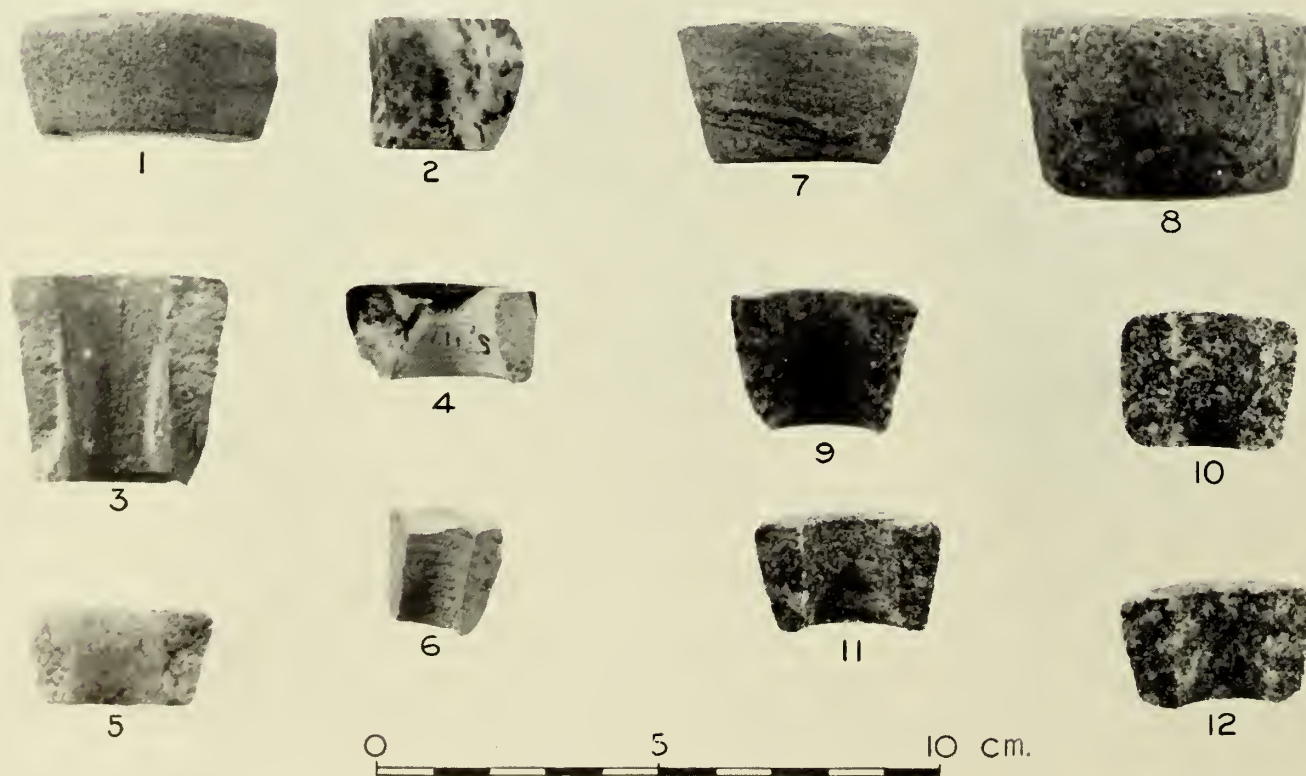


B. Metal objects

See pp. 128, 129



A. Mace-heads and rings



B. Archers' looses

STONE OBJECTS

See p. 130



THE SITE PARTLY EXCAVATED

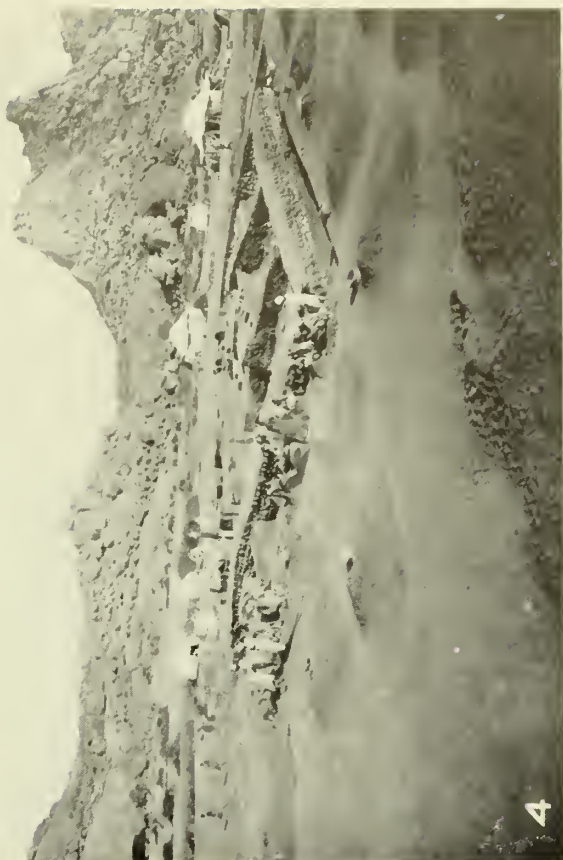
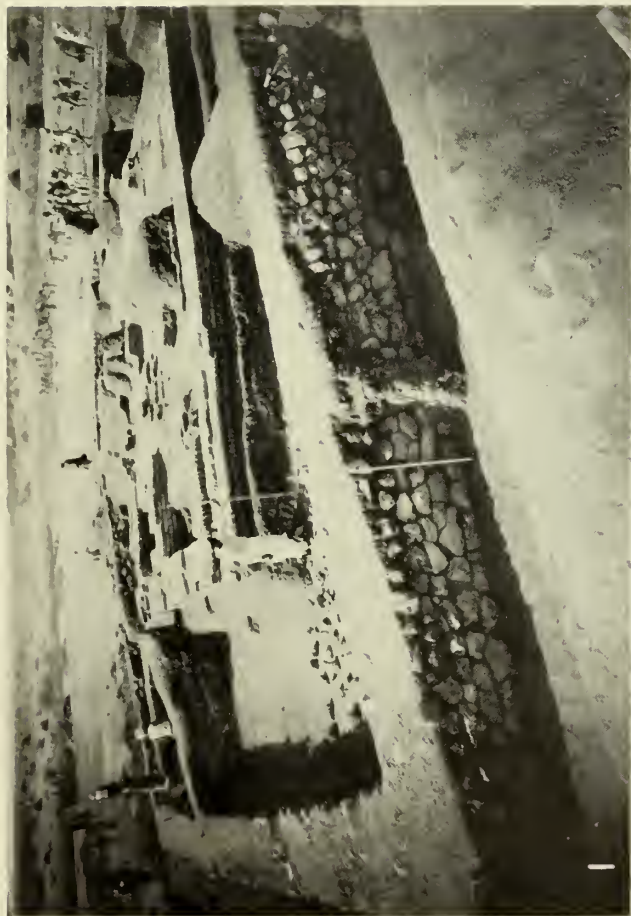
1. View showing debris of unburnt brick. (*Photograph from point 9 on plan, fig. 27, p. 132.*) 2. View in opposite direction to 1. (*Photograph from point 1 on plan, fig. 27, p. 132.*) 3. Burnt bricks in situ in plot κ. 4. View looking east. (*Photograph from point 10 on plan, fig. 27, p. 132.*)

SAQADI



THE BRICK BUILDING PARTLY EXCAVATED

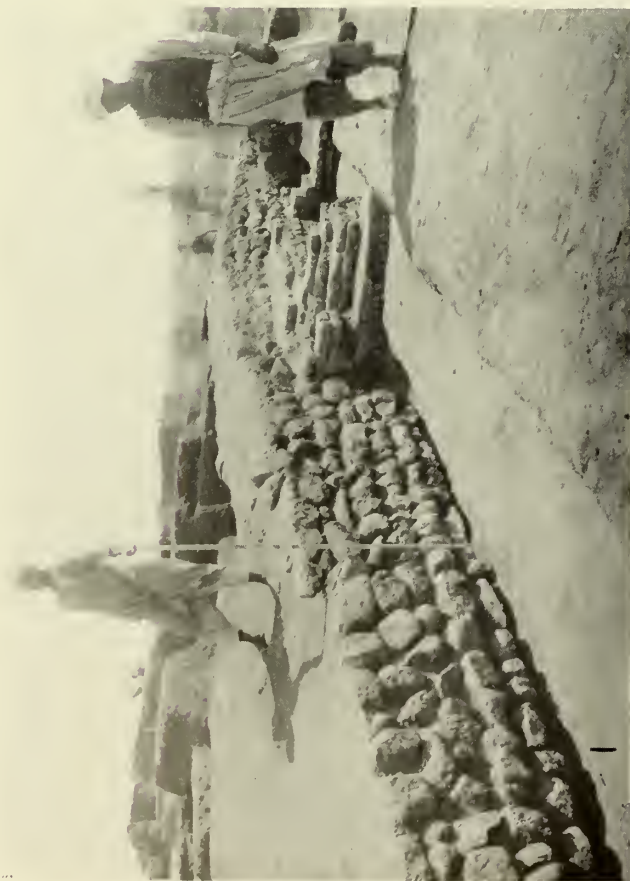
1. Mr. Wellcome inspecting the site. (*Photograph taken from point 2 on plan, fig. 27, p. 132*)
2. View showing, in foreground, north wall of brick building. (*Photograph taken from point 3 on plan, fig. 27, p. 132*)
3. View from point 8 on plan
4. View looking north-east from point 7 on plan



THE BUILDINGS AS FINALLY CLEARED

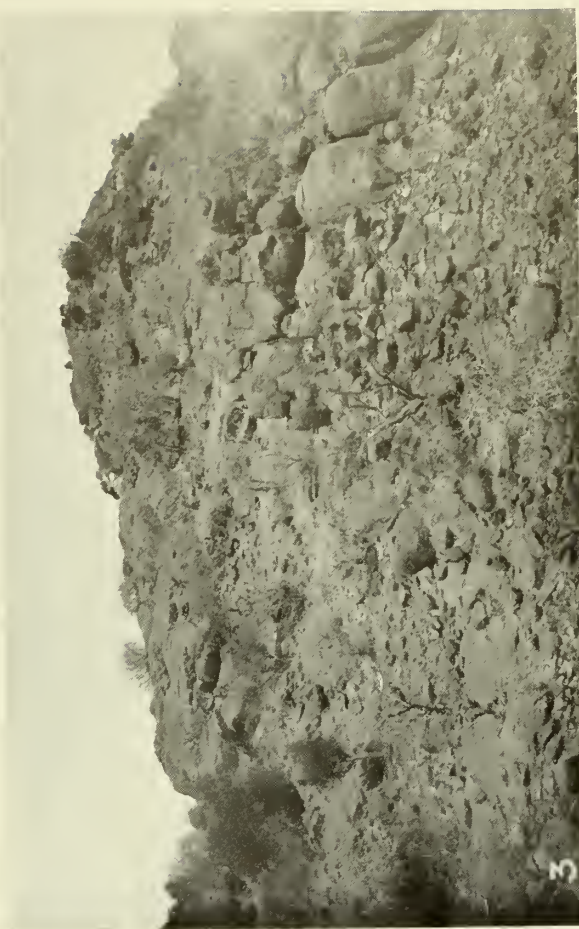
1. View looking south (from point 4 on plan, fig. 27)
2. View looking south-west (from point 5 on plan, fig. 27)
3. View looking south of west (from point 6 on plan, fig. 27)
4. General view from south-east, looking north-west

SAQADI



1 & 2. Remains of stairway outside south wall

3 & 4. Remains of stairway outside north wall

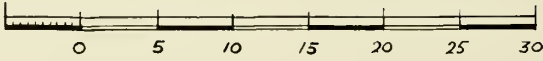


1. View, looking north-east, of the south-eastern spur of Jebel Moya. The Dar el Mek site lies between the two peaks on the extreme right of the photograph
2. View of saddle looking towards the southern peak from the north
3. View of northern peak from the south

See p. 143

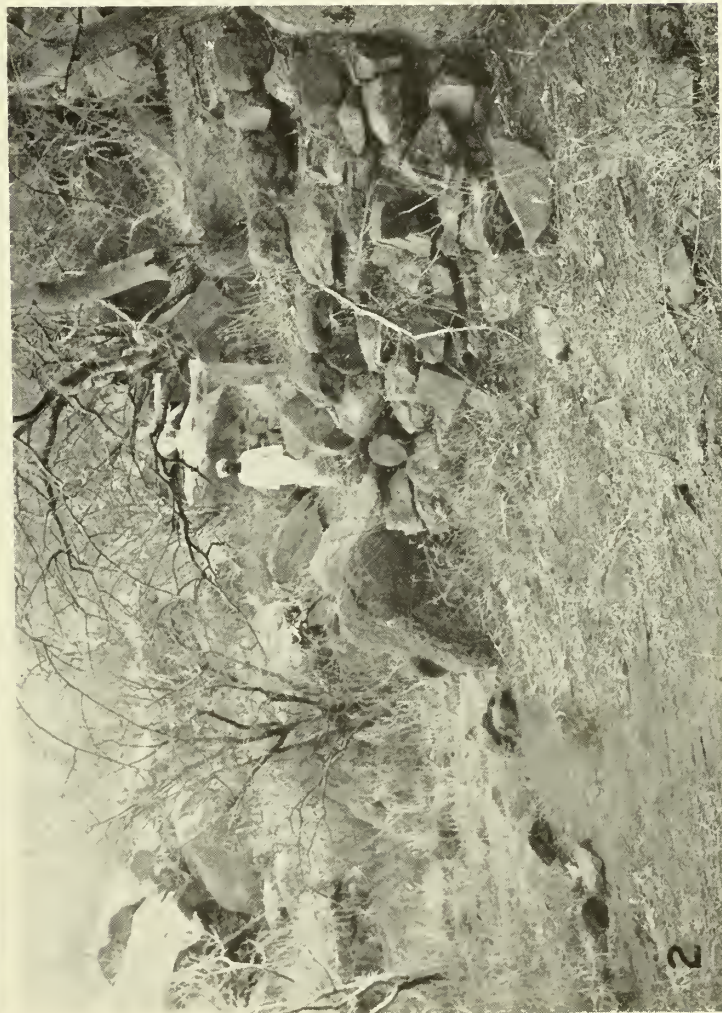


Top of Terrace Wall	— — — — —
Foot of do	— — — — —
Visible at Surface	— — — — —
do (Indistinctly)	- - - - -
Uncovered by Excavation



Scale in Metres

TREES	— — — — —
Ground out Hollows in Fixed Rocks :-	
Large. 25 x 15cms to 18 x 12cms	⊗
Small. 15 x 10cms to 12 x 8cms	○
Flat smooth small patches	●



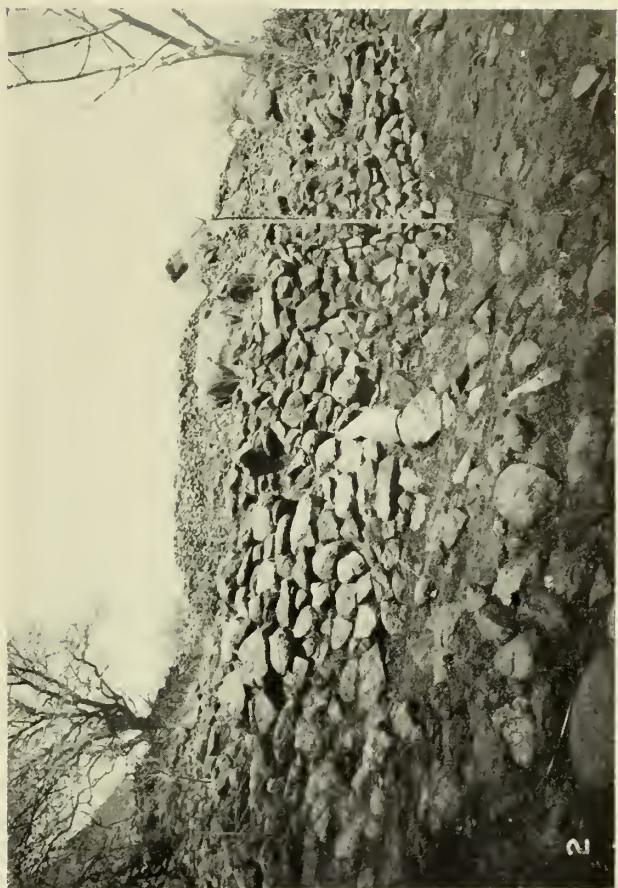
1. View of site from the plain, looking west; great *tebelidi* on sky-line, second tree from left
2. Path up to site from the plain
3. The great *tebelidi* tree



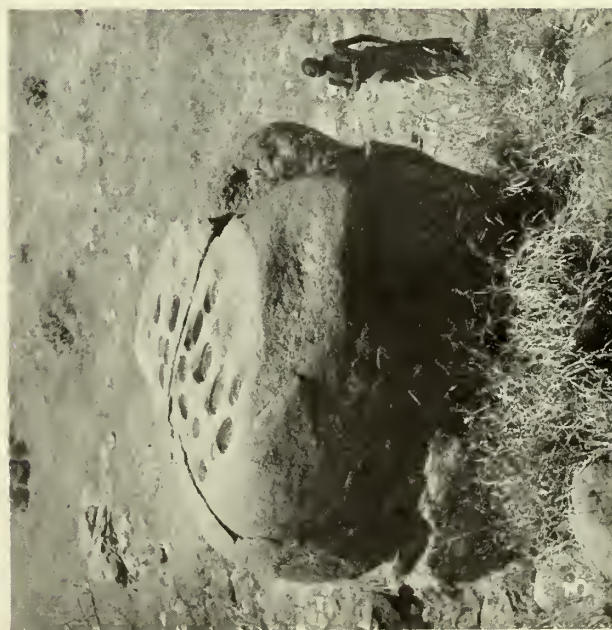
1. View of site, looking north, from slopes of south peak; *tebeldi* tree in foreground



2. View, from almost the same viewpoint as 1, showing excavators' camp in plain below



1 & 2. Terraces



3, 4, & 5. Hollows ground in rocks

DAR EL MEK



1. View of excavations looking north. Mr. Duncan Mackenzie is seen standing in Hut 1

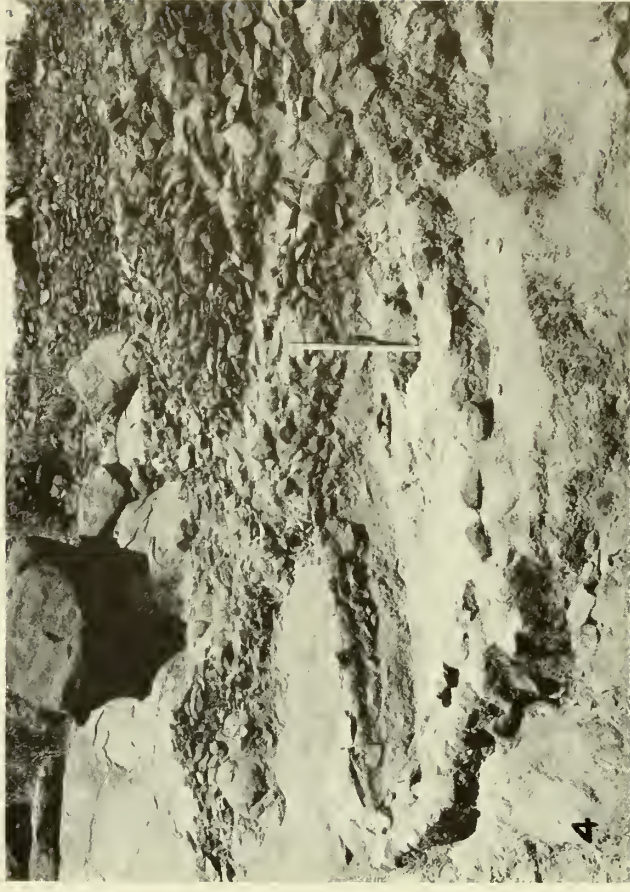
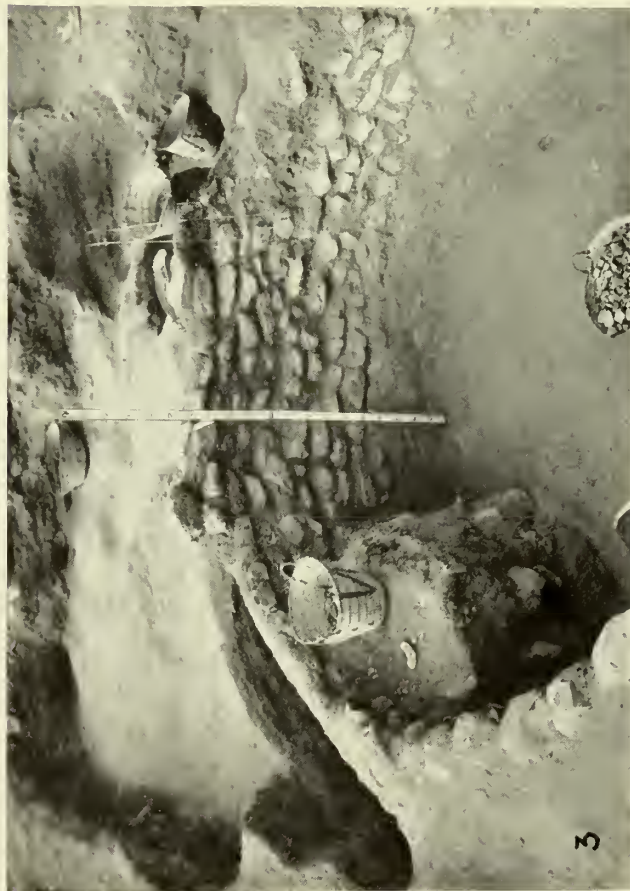
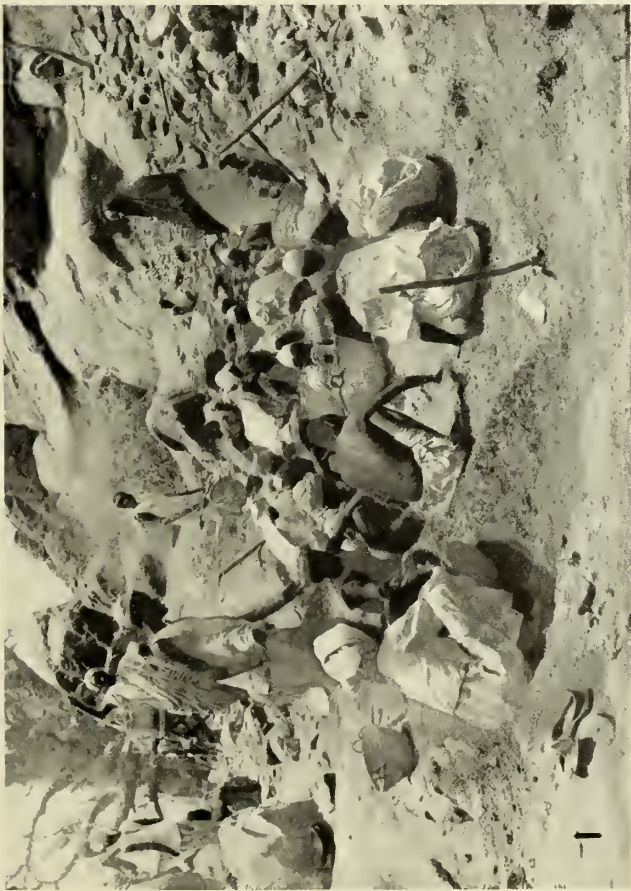


2. Hut 1, showing objects *in situ* on floor
4. Floor of open-air kitchen, with objects *in situ*



3. Hut 4





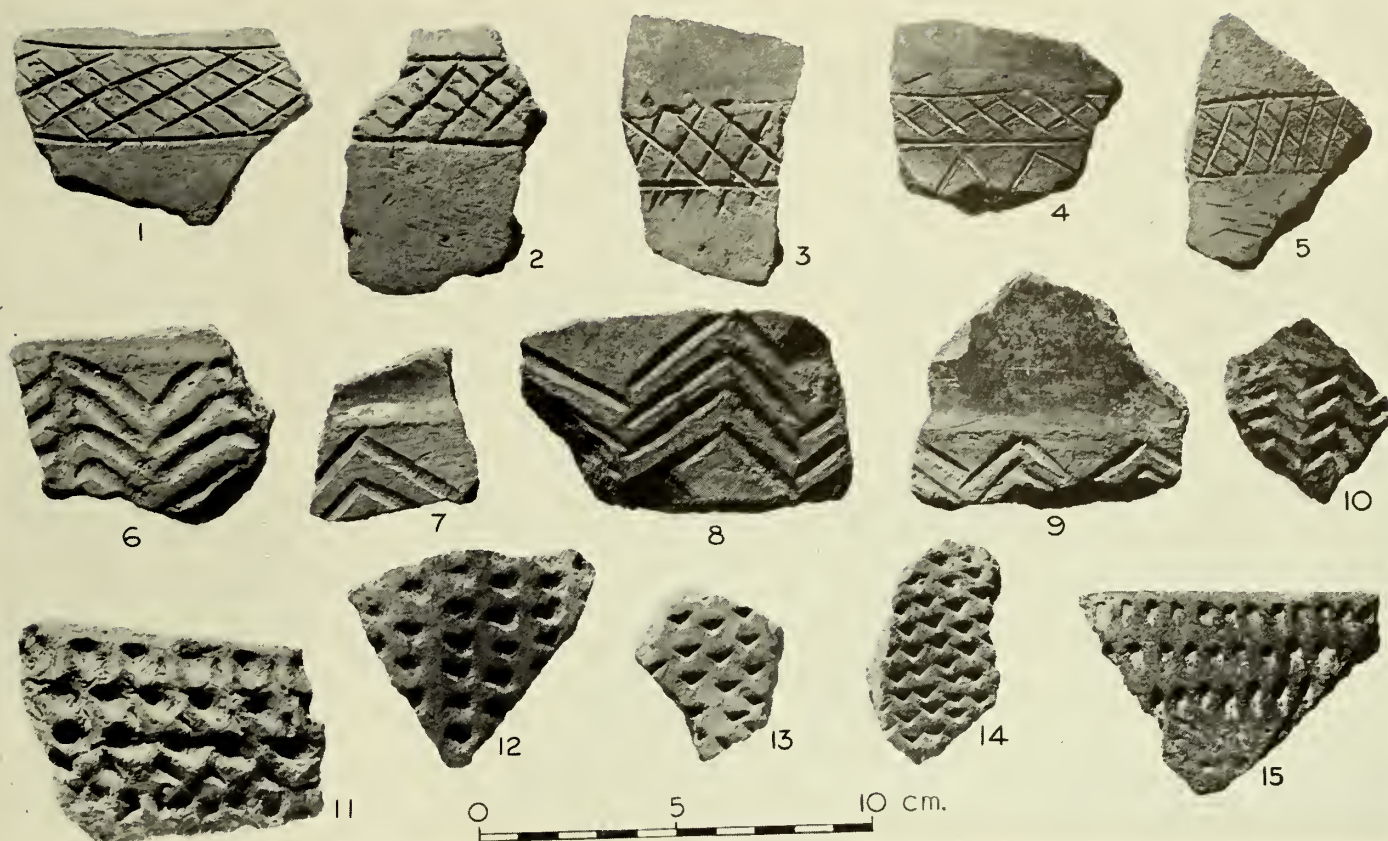
1. Clearing House 12
3. Hut 11

2. Hut 11 (left) and House 12 (right)
4. House 12

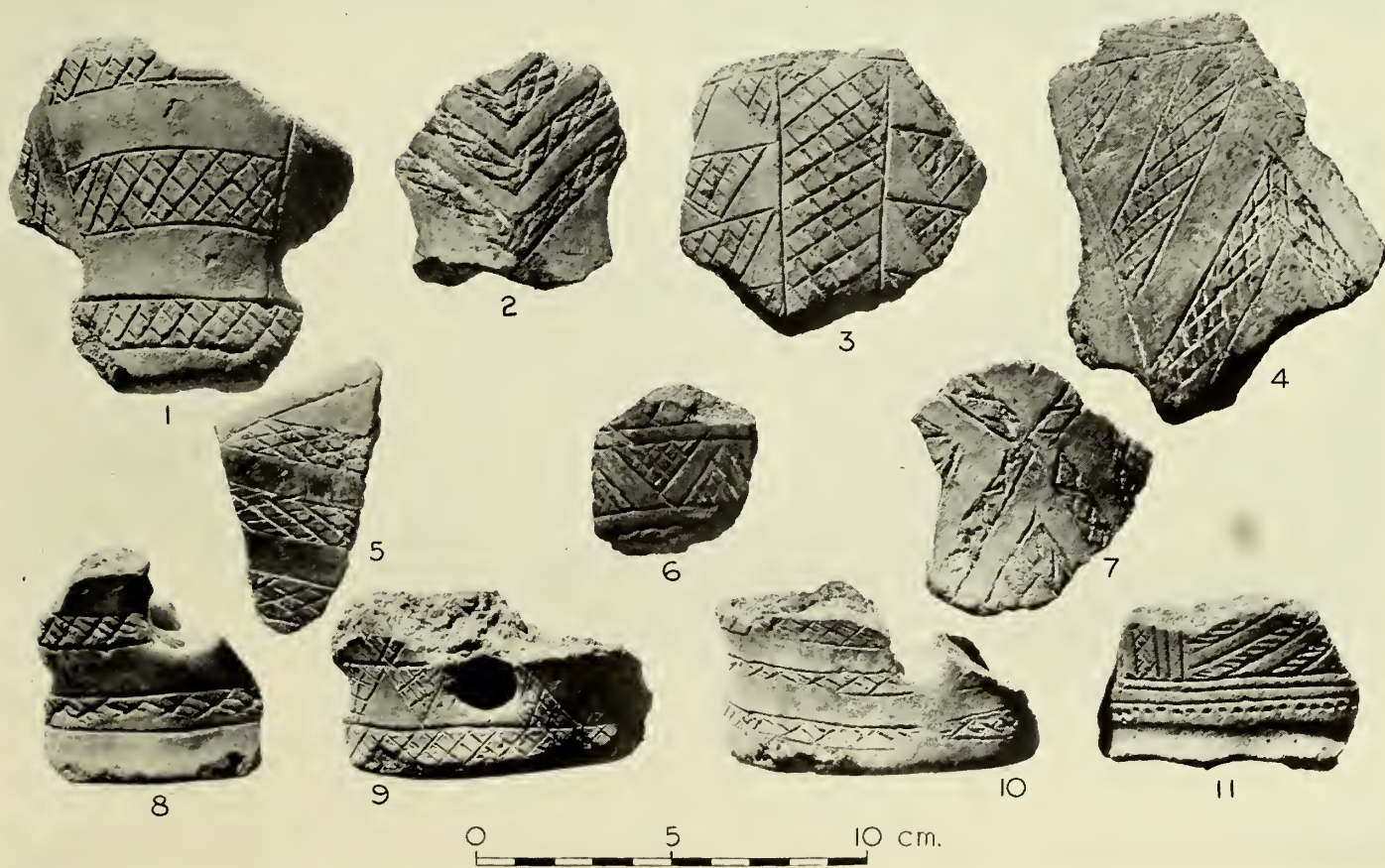
DAR EL MEK



1 & 2. Views from Dar el Mek ridge. 3 & 4. Clearing reservoirs
See p. 160



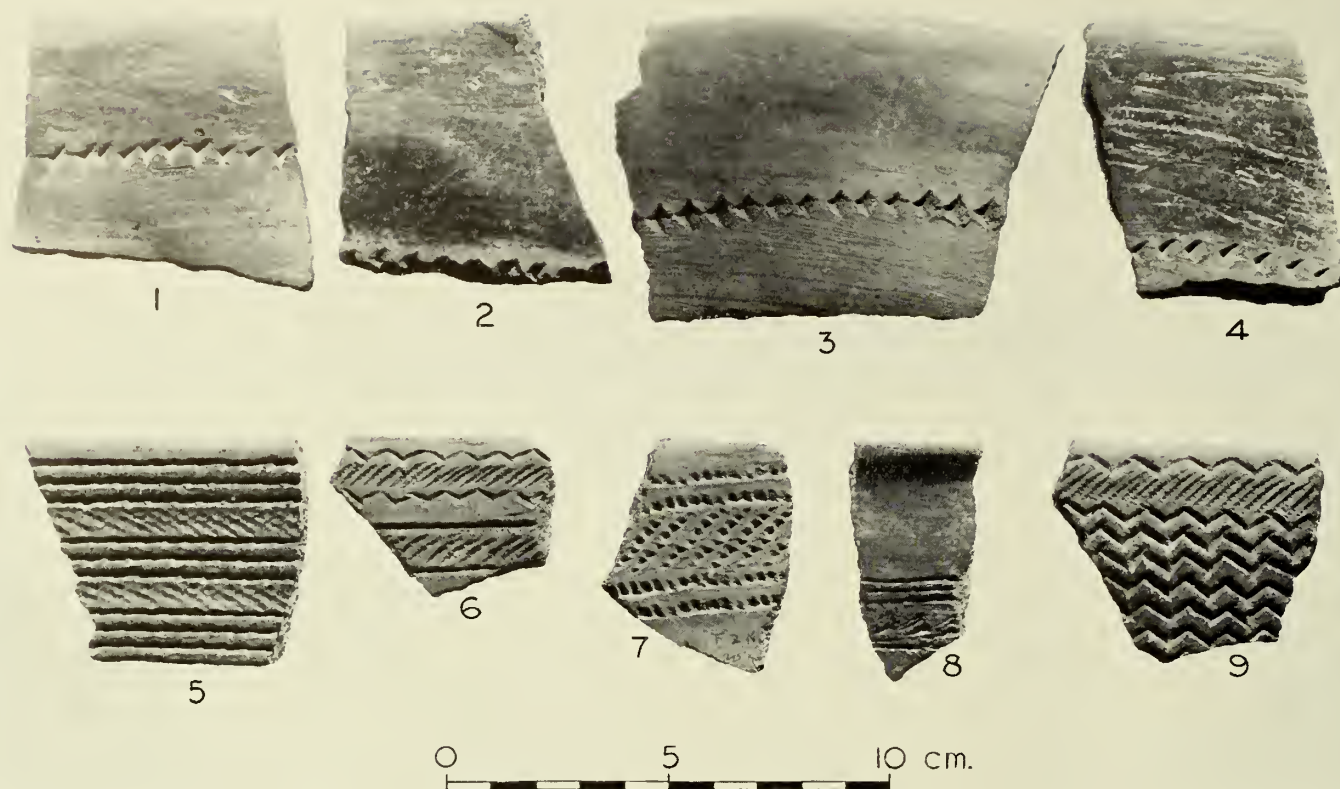
A. Fragments of large pots



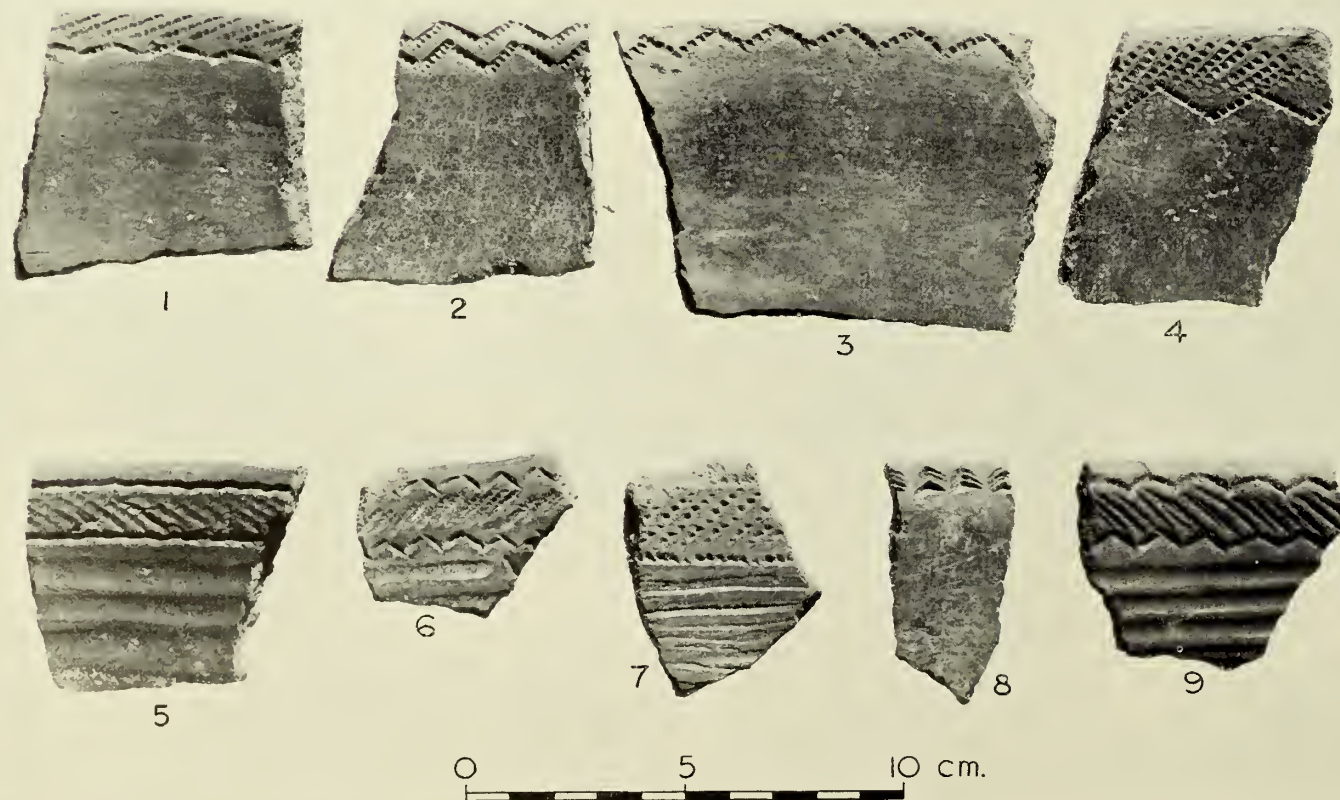
B. Fragments of braziers

POTSHERDS

See p. 170



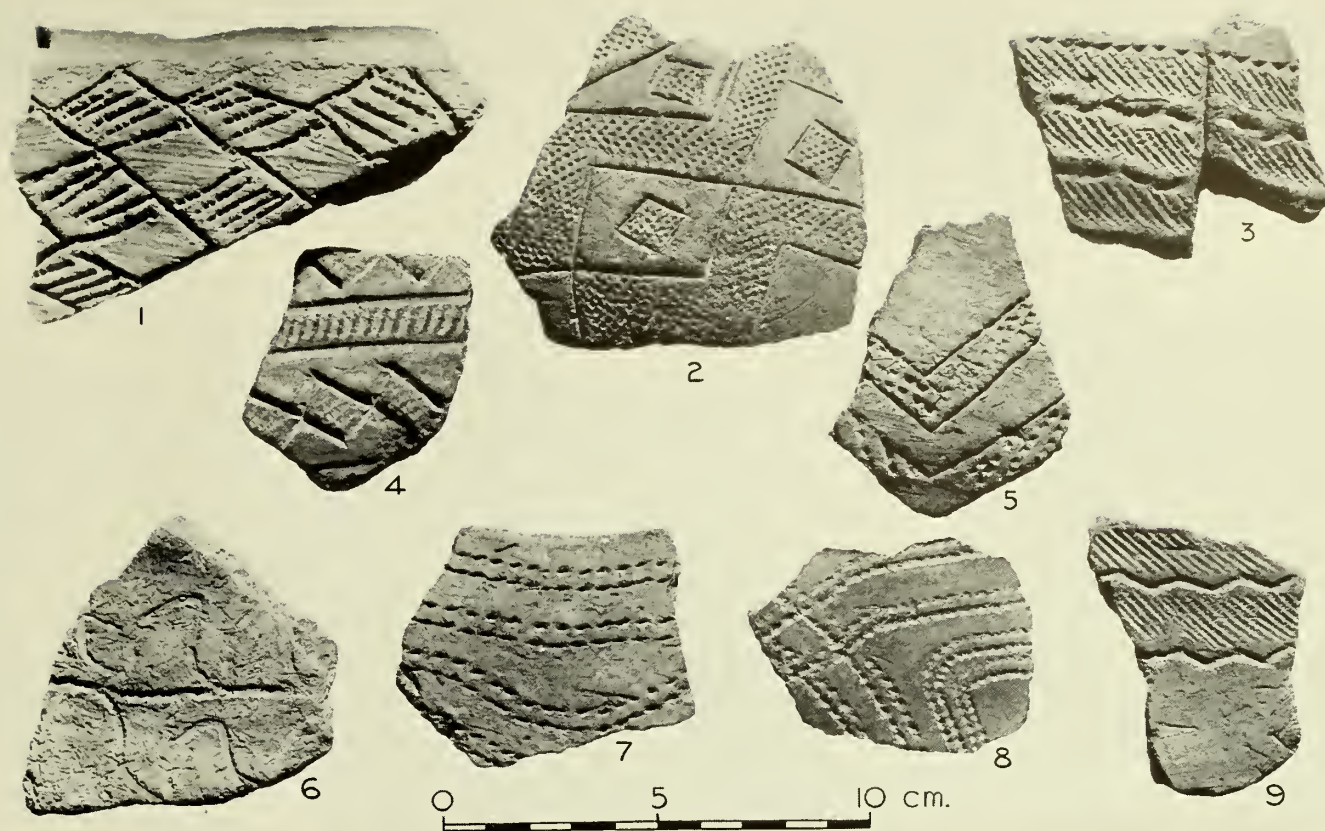
A. Outer surface



B. Inner surface

POTSHERDS DECORATED ON BOTH SIDES

See p. 170



A. Fragments with unusual decorations



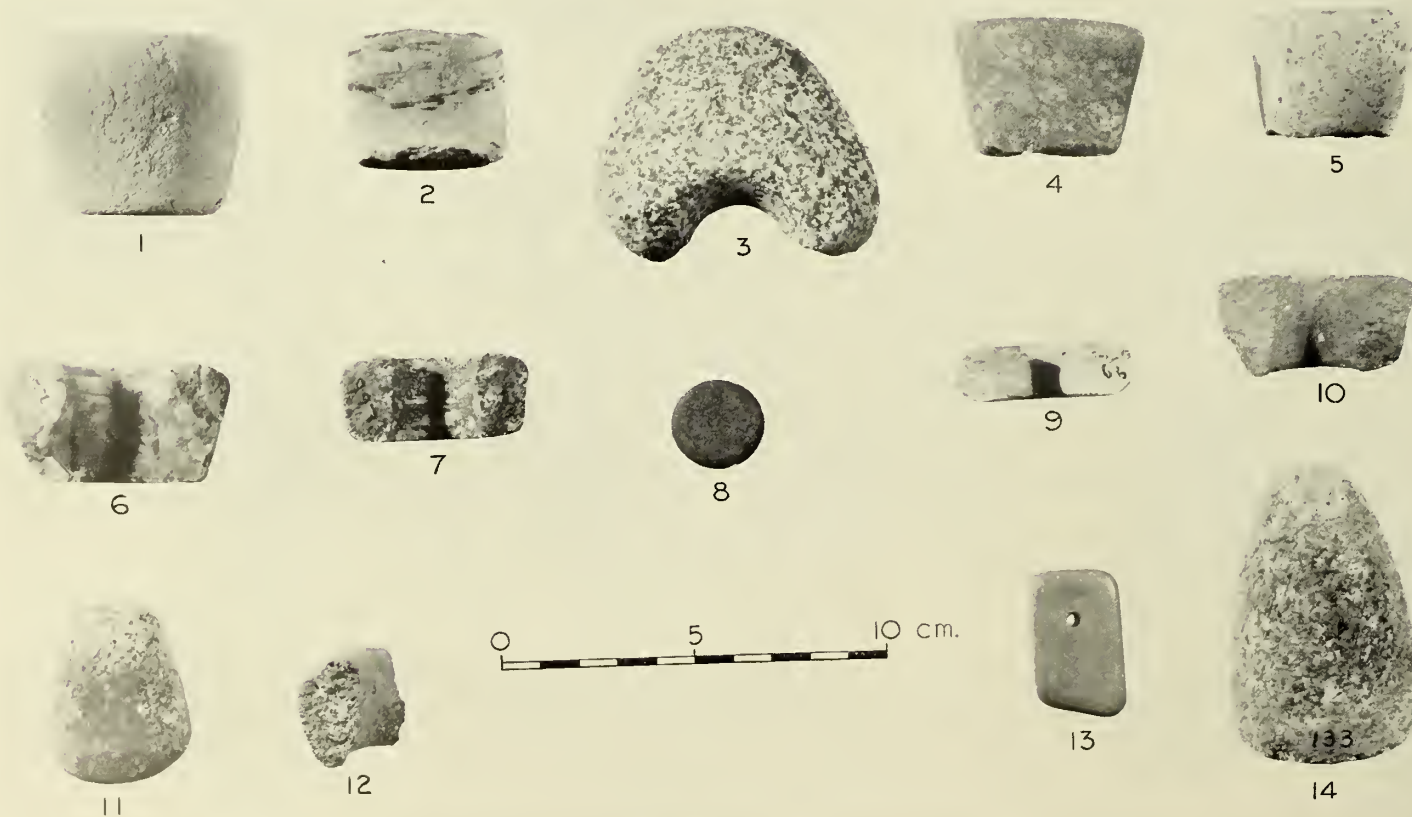
B. Fragments chiefly of 'Fung' ware

DECORATED POTSDHERDS

See p. 171

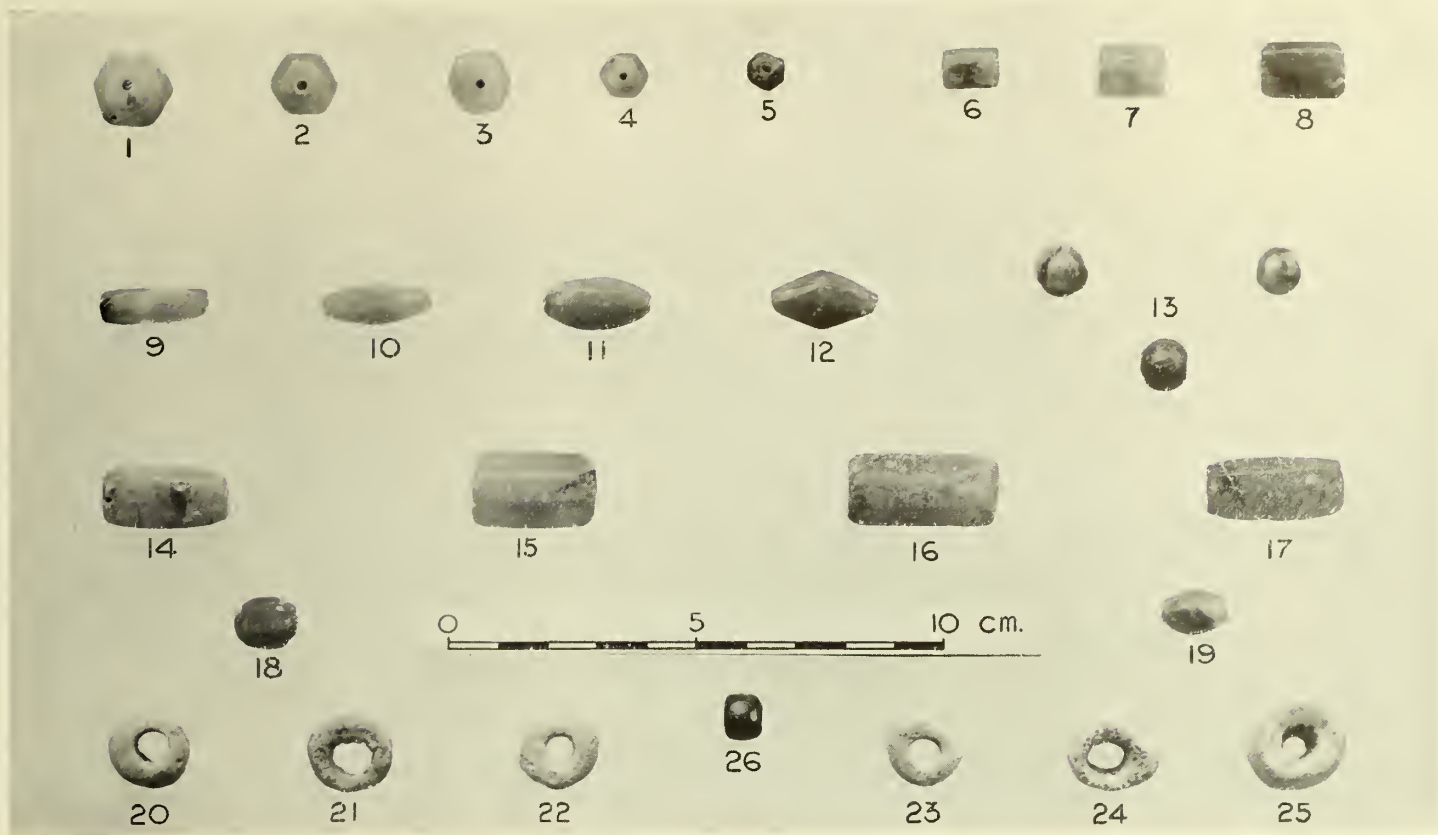


A. Mortars or querns
See p. 146

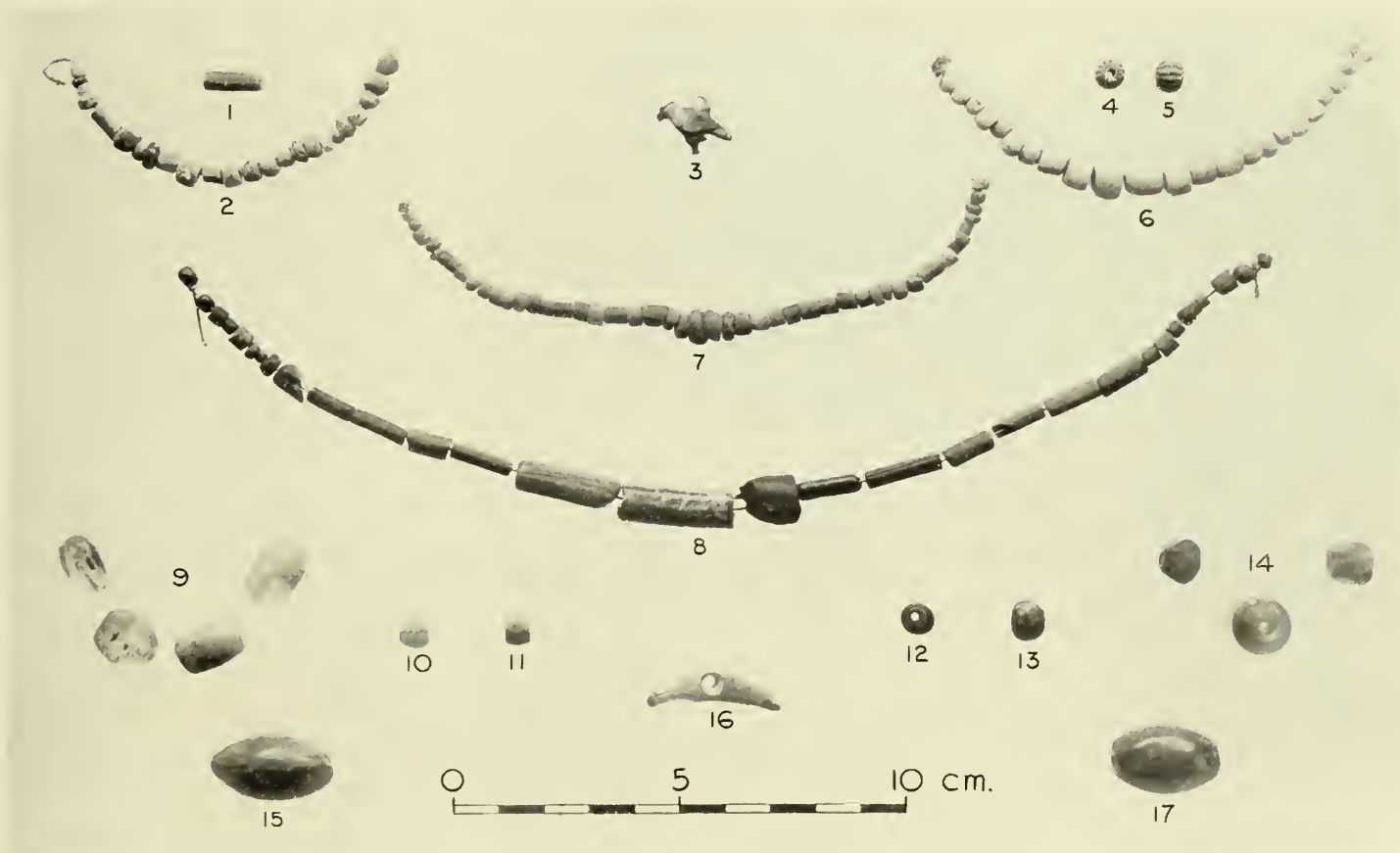


B. Miscellaneous small objects
See p. 177

STONE OBJECTS



A. 1-19. Carnelian; 20-25. Faience; 26. Amber

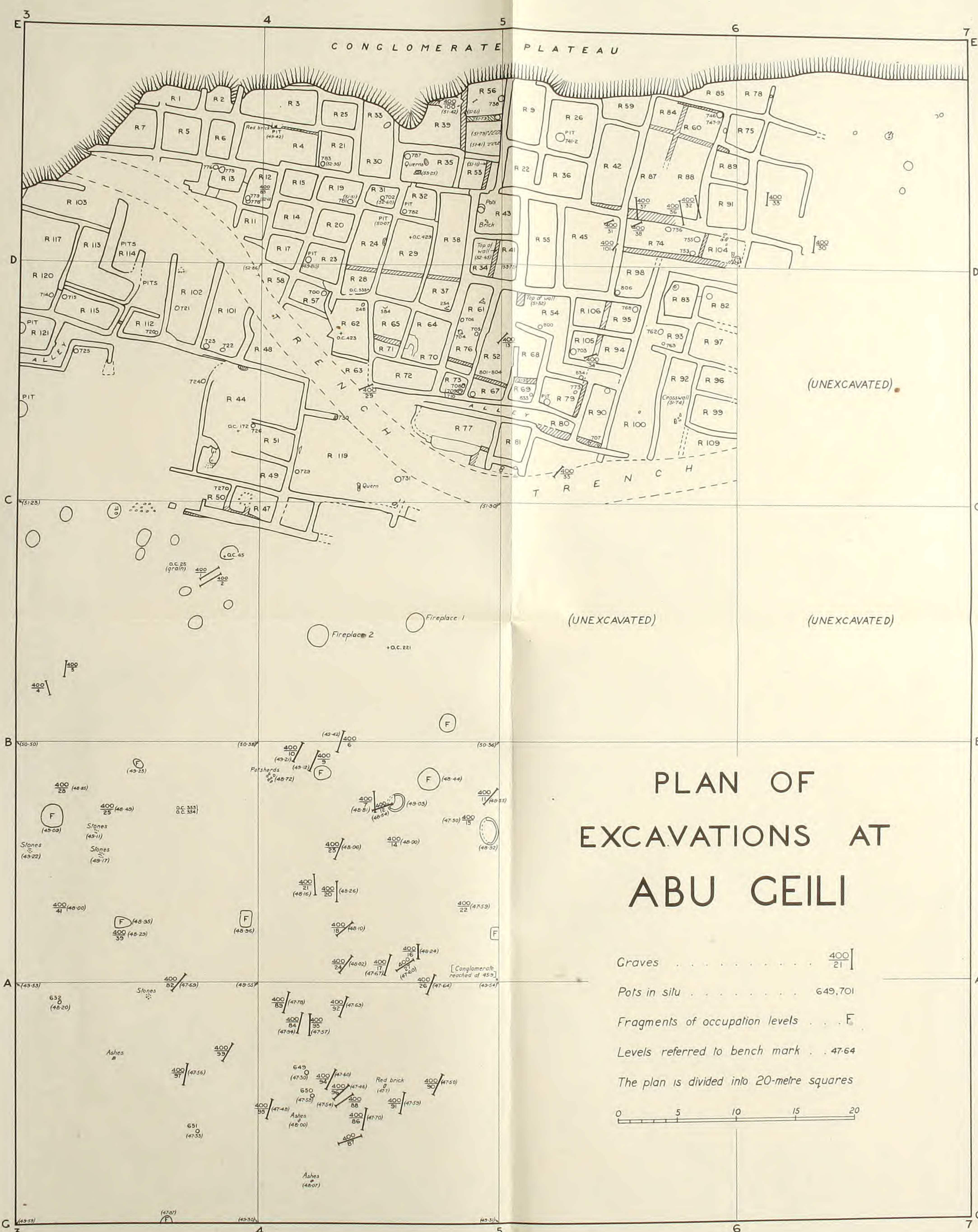


B. Glass, paste, and other materials

BEADS
See p. 177

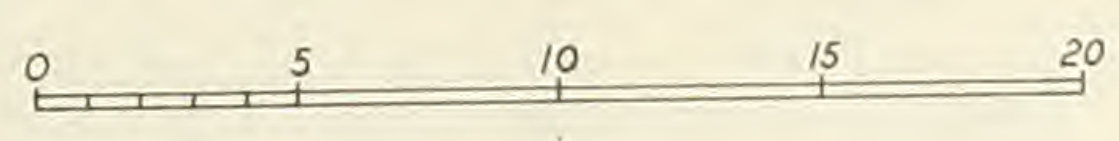






PLAN OF EXCAVATIONS AT ABU CEILI

Graves 400/21
Pots in situ 649,701
Fragments of occupation levels . . . F
Levels referred to bench mark . . 47.64
The plan is divided into 20-metre squares



*Also published by the Oxford University Press
for the Trustees of the late Sir Henry Wellcome*

JEBEL MOYA

By FRANK ADDISON, with a chapter by A. D. LACAILLE

Volume I, Text, 276 pages. Volume II, 116 Plates

Two volumes 126s. net

Jebel Moya lies in the southern Gezira plain between the Blue and White Niles, and the excavations on the site were carried out by the late Sir Henry S. Wellcome during four seasons, 1910-14. After his death, the Wellcome Trustees invited the author to prepare the results of the excavation for publication. This report is the outcome.

'... archaeologists will be grateful to the author for his patient and cautious elucidation of the evidence and to the trustees of Sir Henry Wellcome for this handsome, but by no means extravagant publication.'

MANCHESTER GUARDIAN

LACHISH I

(TELL ED DUWEIR)

The Lachish Letters

By H. TORCZYNER, L. HARDING, A. LEWIS, and A. STARKEY

25s. net

This book contains the eighteen ostraca found at Tell ed Duweir by the Wellcome Archaeological Research Expedition to the Near East. They are the first personal documents in pre-Exilic Hebrew script found in Palestine. The letters are presented in transliteration with both literal and free English renderings, followed by a philological commentary.

LACHISH II

(TELL ED DUWEIR)

The Fosse Temple

By O. TUFNELL, C. G. INGHE, and L. HARDING

25s. net

This volume describes a local centre of worship in a once flourishing city of South Palestine. Its appeal is to readers of the Bible, as well as to archaeologists, for it helps to illustrate the lives of the people whose history is related in the Old Testament.

(Prices are subject to alteration without notice)

OXFORD UNIVERSITY PRESS